



Walgreen Oshkosh, Inc.
304 Wilmot Road
Deerfield, IL 60015
P 847-527-4321
Walgreens.com

February 16, 2017

RECEIVED

By Alameda County Environmental Health 9:21 am, Feb 21, 2017

Ms. Anne Jurek
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Walgreens Diesel Spill Site Investigation
9494 Koopman Road
Sunol, Alameda County, California
Site Cleanup Case No. RO0003158
GeoTracker Global ID: T10000006478

Dear Ms. Jurek:

On behalf of Walgreen Oshkosh, Inc. (Walgreens), Bureau Veritas North America, Inc. (BVNA) prepared the attached Walgreens Diesel Spill Site Investigation Report, dated February 15, 2017 to comply with your letter dated October 27, 2016. The report summarizes the activities following the diesel spill that occurred on November 22, 2014 and further characterizes soil in the drainage and at the truck crash site to confirm that clean-up activities following the diesel spill were appropriate.

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

If you have any questions or concerns, please contact Chris Whitehurst at 530-406-7733

Sincerely,

Sean Barbour
Vice President, Walgreen Oshkosh, Inc.

Enclosures

Cc:



February 15, 2017

Anne Jurek
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Project No. 33115-015204.00

Subject: Walgreens Diesel Spill Site Investigation Report
9494 Koopman Road
Sunol, Alameda County, California
Site Cleanup Case No. RO0003158
GeoTracker Global ID T10000006478

Dear Ms. Jurek:

Bureau Veritas North America Inc. (BVNA) prepared this report on behalf of Walgreen Oshkosh, Inc. (Walgreens) summarizing the findings of a limited site investigation that received approval from Alameda County Environmental Health (ACEH) in a letter dated October 27, 2016. ACEH conditionally approved BVNA's Revised Work Plan, dated April 4, 2016. This site investigation was conducted to assess if residual diesel fuel in drainage soils existed that would require additional assessment or cleanup due to the release that occurred on November 22, 2014.

If you have any questions or concerns, please contact me at (925) 426-2679.

Sincerely,

Donald A. Ashton, PG, REPA, QSD
Senior Project Manager
Health, Safety and Environmental Services
Don.Ashton@us.bureauveritas.com

cc: Chris Whitehurst, Walgreens - Senior Manager Regional Fleet Operations
Edward Lee, Walgreens - Field Compliance Manager
William Ragsdale, Clean Harbors Environmental Services

Enclosures

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Walgreens Diesel Spill Site Investigation Report

Truck Crash Site
9494 Koopman Road
Sunol, California

February 15, 2017
33115-015204.00

Prepared for
Clean Harbors Environmental Services
San Jose, California



For the benefit of business and people

Bureau Veritas North America, Inc.
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1.0 INTRODUCTION

Bureau Veritas North America, Inc. (BVNA) prepared this report on behalf of Walgreen Oshkosh, Inc. (Walgreens), which summarizes clean-up activities following the Walgreens truck crash and diesel spill that occurred on November 22, 2014 and the findings from this follow-up site investigation. The findings of this site investigation support that the spill cleanup activities conducted in 2014 were effective in remediating the fuel spill.

This site investigation report is in response to a request for a technical report originally initiated by Alameda County Environmental Health (ACEH) in a directive letter dated June 11, 2015 (ACEH, 2015), and the more recent letter: *Revised Work Plan Approval for Site Cleanup Program Case No. RO0003158*, dated October 27, 2016 that conditionally approved the *Revised Work Plan for Walgreens Fuel Spill Site Investigation*, prepared by BVNA, dated September 7, 2016.

1.1 BACKGROUND

In establishing the following background summary, BVNA reviewed a report prepared by Clean Harbors Environmental Services (CHES): *Walgreens Diesel Spill Emergency Response and Cleanup Summary*, dated January 19, 2015 (CHES, 2015), and obtained information online from ACEH public records for this case (gis.acgov.org: Case No: RO0003158). BVNA met with and interviewed ACEH staff involved with the cleanup case in a meeting held on July 28, 2016. Beginning in about July 2016, BVNA also interviewed Mr. Neil Fujita of the San Francisco Public Utilities Commission (SFPUC), a Water Resources Manager that manages the downgradient property west of Sunol-Pleasanton Road that was a part of the spill clean up action.

On November 22, 2014, a Walgreens semi-truck and trailer crashed during a rain event on the east side of Interstate 680 about 400 feet south of Koopman Road and came to rest by a storm water concrete 'V' ditch (see Figures 1 and 2). The accident reportedly resulted in a release of approximately 150 gallons of diesel fuel. The ditch reportedly carried rain water and some of the spilled fuel to the north toward Koopman Road where it turns to the west and enters a concrete culvert that passes under the freeway and Pleasanton-Sunol Road. The culvert daylight just west of Pleasanton-Sunol Road where it discharges to an unlined drainage, which discharges to Arroyo de la Laguna. The total distance from the crash site to the Arroyo is approximately 1,200 feet (see Figure 2).

An emergency cleanup response was initiated for the crash event (reported crash time 09:30 hours), resulting in a CHES clean-up response team arriving at about 11:30 hours on November 22, 2014. CHES implemented measures to contain the fuel spill. Upon arrival at the site, CHES placed three petroleum absorbent booms at intervals across the distal portion of the drainage where it is unlined west of Pleasanton-Sunol Road before the Arroyo. Mr. Sanchez, the CHES response team field supervisor is reported as stating there was rain upon arrival, and that no fuel was observed to have collected on the absorbent booms (ACEH Site Inspection Notes, June 11, 2015). There is no documentation as to how much fuel was released to the storm drain and how far it migrated downgradient.

Cleanup operations continued over the next three days. Cleanup operations consisted of removing fuel impacted soil at the crash site, which was reported to be a small area of about 4 feet, by 2 feet by about 1.5 feet deep, the area where the fuel tank leak reportedly occurred (see photographs in ACEH Inspection Notes dated November 26, 2014, and the attached photo page). The downgradient ditch and culvert were cleaned of vegetation debris and soil that were observed to be impacted by fuel. The distal unlined portion of the drainage between Pleasanton-Sunol Road and the Arroyo was also cleaned by removing debris and soil that lined the bottom of the storm water drainage; however, there is no mention as to the potential for fuel contamination in this



portion of the drainage. Soil was reportedly removed for about 200 lineal feet along the unlined drainage channel to a depth of about 2 feet in an area that ranged from about 15 feet wide near the terminus of the concrete lined drainage and narrowed to a width of about 2 feet wide as it ran to the bank of the Arroyo.

BVNA reviewed precipitation records on Weather Underground (www.weatherunderground.com) for the general area prior to the day of the crash and for several days thereafter, to better understand the conditions at the time of the crash, during site cleanup and the post cleanup sampling event. The following table lists precipitation for the Livermore Municipal Airport (NOAA Station KLVK), an upgradient weather station. Recorded precipitation is as follows:

Date	Daily Precipitation Total (inches)	Total Precipitation Since 7-1-2014
11-19-2014	0.05	0.80
11-20-2014	0.39	1.19
11-21-2014	Trace	1.19
11-22-2014 Spill Event	0.05	1.24
11-23-2014	0.00	1.24
11-24-2014	0.00	1.24
11-25-2014	0.00	1.24
11-29-2014	0.03	1.27
11-30-2014	0.44	1.71
12-1-2014 Sampling Event	0.05	1.76
12-2-2014	1.41	3.17
12-3-2014	1.28	4.45
12-4-2014	0.04	4.49
12-6-2014	0.05	4.54
12-10-2014	0.00	4.56

The above precipitation records indicate that a near significant rain event happened two days prior to the crash; however, the day before and the day of the crash only light rain fall was indicated. Therefore, fuel impacted runoff in the ditches was likely of limited extent due to the length of the drainage and beginning of the wet season.



Precipitation records indicate that there was light rain to no rain during the period of cleanup (November 22 to 26, 2014). Incident waste manifests (CHES, 2015) indicate that 12 drums of diesel impacted debris and soil were removed on November 24, 2014. An additional 31 drums of potentially fuel impacted soil were removed on November 26, 2014, and a 20 cubic yard bin reportedly containing debris, logs, leaves and other solids was removed on December 8, 2014 (CHES, 2014).

ACEH staff (Ms. Barbara Jakub and Mr. Rob Weston) visited the crash site on November 26, 2014, four days after the crash. Their inspection notes summarize site observations and other event specifics (ACEH Site Inspection Notes, dated November 26, 2014), that also include site photographs. It was noted that there was some concern that the fuel spill might have reached the Arroyo. SFPUC owns the land where the drainage is unlined and discharges to the Arroyo. ACEH notes indicate that a groundwater irrigation well (Arroyo Well #1) located about 100 feet south of the unlined drainage could be impacted (see Figure 2 for location). However, the ACEH Inspection Notes indicate that the well was not in use during the wet season and due to the site cleanup, "it is unlikely that the well has been impacted."

CHES collected two soil samples (Soil Sample #1 and #2, reportedly two discrete duplicate samples) from the distal portion of the unlined drainage (Figure 2 depicts the approximate sample location; BVNA replotted the sample location to align with the unlined drainage) as confirmation of the cleanup activities. Additionally, two well water duplicate samples (Water Sample #1 and #2) were collected from the nearby SFPUC well (Arroyo Well #1) spigot. The CHES report states that Mr. Fujita turned on the spigot for sampling; however Mr. Fujita stated that he was not on site that day and that someone else from SFPUC may have assisted CHES. The CHES Chain of Custody documents collection of the soil and well water samples on December 1, 2014 at 10:20 hours. Soil and water analysis was by U.S. EPA 8015B protocol for total petroleum hydrocarbons as diesel ranged organics (DRO). This analytical procedure used reports both polar and non-polar hydrocarbons within the diesel fuel range. Refined fuels consist of non-polar hydrocarbons; therefore, unless sample preparation is conducted using the silica-gel cleanup procedure removing polar compounds, the total DRO concentration as fuel is typically skewed to be high for soil samples that include biologic compounds.

A summary of the CHES sample results is provided as follows:

Analytical Method	CHES Sample ID - Date	Sample 1 Water (µg/L)	Sample 2 Water (µg/L)	Sample 1 Soil (mg/kg)	Sample 2 Soil (mg/kg)
TPH as DRO (C10 to C28)	12-1-2014	349	135	283	505

Notes:

TPH as DRO = Total petroleum hydrocarbons as diesel range organics by U.S. EPA Method 8015B

µg/L = micrograms per liter

mg/kg = milligrams per kilogram

The reported soil and well water results slightly exceed the Tier 1 Environmental Screening Levels (ESLs) for residential land use of 230 mg/kg for shallow soil and for groundwater of 0.100 mg/L, established by the Regional Water Control Board (December 2013 and February 2016). Laboratory quality control (QC) data indicates that the results of the water samples were within acceptable surrogate recovery limits; however, the two soil sample results were just under the upper acceptable surrogate recovery limit; therefore, the soil results are likely skewed high due to the elevated laboratory recovery limit.



BVNA obtained and reviewed the laboratory chromatograms for each of the 2014 sample results along with a standard DRO and motor oil ranged organics (ORO) chromatogram provided by the laboratory, which is presented in the Quantitation Report, Page 2; last page of Appendix B in BVNA's (BVNA's *Revised Work Plan* dated September 7, 2016). Review of the standard chromatogram indicates that the DRO and the ORO curves both have typical bell shaped curves. However, the two soil sample chromatograms have a somewhat skewed curve for the DRO concentrations. Chromatograms for the two water samples show a suppressed curve significantly skewed toward the longer chained carbon compounds within the DRO limits. Skewed curves are characteristic of weathered DRO and ORO concentrations as petroleum hydrocarbons typically degrade with age. Therefore, the skewed signature of DRO compounds in the soil and water samples indicate that the reported DRO concentrations in the samples are likely from prior and aged DRO releases and not due to the Walgreens diesel product release.

Mr. Neil Fujita, SFPUC Water Resources Manager was interviewed by BVNA on several occasions regarding his involvement during and following the spill cleanup activities. He stated he was not involved during cleanup or post cleanup sampling activities conducted by CHES. The CHES report states that duplicate well water samples were collected by Mr. Fujita; however, he stated that someone else likely assisted CHES in collecting the well water samples on December 1, 2014. Mr. Fujita stated that on December 10, 2014, he collected one surficial soil sample immediately downgradient of the concrete lined outfall (Figure-2, same approximate location as sample location BV-2), a well water sample (Arroyo Well #1), and an off-site water holding tank sample that the well fed. Mr. Fujita provided BVNA with analytical data sheets for these samples (see Appendix C). A summary of the sample results is provided as follows:

Sample ID	Wellhead Water (µg/L)	Tank Water (µg/L)	SCC Soil (mg/kg)
TPH as ORO	ND <250	ND <210	590
TPH as DRO	ND <50	ND <50	250

Notes:

TPH as DRO = Total petroleum hydrocarbons as diesel range organics by U.S. EPA Method 8015B

TPH as ORO = Total petroleum hydrocarbons as motor oil range organics by U.S. EPA Method 8015B

µg/L = micrograms per liter

mg/kg = milligrams per kilogram

ND <250 = Not Detected, laboratory analytical result less than the Method Detection Limit listed

The above analytical results support the soil sample results obtain by CHES that were collected in the unlined drainage; however, the well water samples had no reportable DRO detections above the laboratory reporting level. The DRO concentrations are well below the residential and commercial ESL.

Mr. Fujita provided BVNA with a copy of the Well Completion Report for the irrigation well (Arroyo Well #1) with drilling and well construction details (Appendix B). The well log indicates that it was installed in January 2014, prior to the Walgreens diesel release. During the site visit on November 22, 2016, BVNA observed that Arroyo Well #1 is located about 90 to 100 feet south of the unlined drainage channel and it is elevated at least 10 to 15 feet above the level of the drainage. The well log indicates that the well borehole is 20 inches in diameter, drilled to a total depth of 39 feet, with a 9-inch diameter well casing. A surface seal of grout was placed from the surface to a depth of 23.5 feet and a bentonite clay seal was placed from 23.5 to 28 feet. The well casing is screened from 28 to 38 feet. The well surface completion consists of a raised concrete pad and well casing that is about a foot above grade. The wellhead area is not known to flood during rain events.



BVNA learned that another truck crash occurred on December 10, 2015 when a street sweeper veered off of the highway and crashed in essentially the same location as the 2014 Walgreen truck crash. It is unknown if this crash resulted in a significant fuel release.

2.0 SCOPE OF WORK

The scope of work for this limited site investigation included the following tasks:

- Obtaining access to the unlined drainage on the SFPUC property.
- Obtaining access to the crash site through Cal Trans. BVNA contacted Mr. Bill Kimball, Regional Maintenance Manager regarding crash site access. Mr. Kimball stated that site access by foot did not require an encroachment permit providing all access and work did not encroach on or from the freeway.
- Obtaining the appropriate equipment for surficial soil sampling using hand sampling equipment
- Submitting soil samples for laboratory analysis for DRO content
- Generating a summary report for the limited site investigation.

2.1 FIELD ACTIVITIES AND SAMPLING PROCEDURES

On November 22, 2016, BVNA met Mr. Fujita on the SFPUC property to collect soil samples from the unlined drainage west of Sunol-Pleasanton Road. Mr. Fujita escorted BVNA while on SFPUC property. On the day of the site visit, BVNA observed an absorbent boom located in the drainage immediately west of the concrete lined outfall. It is unknown if the boom is from a more recent event or left over from the site cleanup activities from 2014 (see Appendix A site photographs). No indications of petroleum staining or odors were noted during the site visit in the unlined drainage or on the remaining absorbent boom. BVNA collected soil samples at two locations from the base of the unlined drainage. BV-1 was located near the bank of the Arroyo, just east of what appeared to be Arroyo bank reinforcement material or rip-rap (boulder sized angular crystalline rocks) that extended up the bank into the drainage. Two soil samples were collected from the center of the narrow drainage ditch. The first sample was collected by first hand augering a hole to a depth of about 0.5 feet. A core sample barrel lined with a stainless steel sleeve (2 inches in diameter by 6 inches in length) was then hand driven to a total depth of 1.0 feet below the ground surface (bgs). The core barrel was extracted and the liner containing a relatively undisturbed soil sample was removed and sealed. The liner ends were covered with Teflon sheets and plastic end caps, labeled with sample identification, and placed into a chilled cooler. The boring was then deepened using a hand auger to a depth of about 1.5 feet where auger refusal was encountered due to cobbles. The core sampler was then inserted into the hole with a new liner and a second sample was collected in the same manner from the depth of approximately 1.5 to 2.0 feet bgs. BVNA collected two additional samples from boring BV-2 at the end of the concrete lined channel near the drainage outfall at Sunol-Pleasanton Road (see Figure 2). The samples were collected in the same manner.

BVNA accessed the crash site on foot from Koopman Road. BVNA located a depression on the east immediate side of the concrete 'V' ditch, which appeared to be the same spot where CHES had excavated diesel impacted soil at the crash site based on photographs attached to ACEH's Investigation Notes dated November 26, 2014. Two soil samples were collected from boring BV-3 that was advanced in the bottom of the depression. Soil samples were retained from 0.5 to 1.0 feet and 2.0 to 2.5 feet bgs from the BV-3 location. The samples were prepared in the same manner as the earlier samples and logged onto a Chain of Custody document for transportation to the analytical laboratory (see Appendix D).



Sample liners were obtained new and clean from an environmental supplier and the hand sampling equipment was cleaned of debris and washed and dried prior to the collection of each sample. Sample locations are presented on Figure 2 and in the photograph section of this report.

2.2 LABORATORY ANALYSIS

BVNA submitted a total of six (6) soil samples to a State-certified laboratory; however, only four of the six samples (BV-1 0.5-1.0', BV-1 1.5-2.0', BV-3 0.5-1.0', BV-3 2.0-2.5') were selected for laboratory analysis. The samples from boring BV-2 were placed on hold in laboratory custody. The four selected samples were analyzed by the following United States Environmental Protection Agency (USEPA) Methods:

- Total Petroleum Hydrocarbons (TPH) as diesel range organics (DRO) by EPA Method 8015B – four samples were prepared both with and without silica gel cleanup (SGC) in order to evaluate whether the analytical results include both polar and non-polar petroleum hydrocarbons.

3.0 INVESTIGATION FINDINGS

Soils encountered generally consisted of silt to silty sand with some clay and gravels that were brown to reddish brown and damp to moist to the total sampled depth of 2.5 feet bgs. Sampling was conducted on a clear and calm day. Soils in the unlined portion of the drainage were located in areas of engineered drainage development that had been enhanced with cobbles for erosion control. BVNA did not observe evidence of contaminated soil (e.g., discoloration, odors) in the borings advanced during this investigation. Also, BVNA did not observe indications of fuel staining or odors within the indicated truck crash site and along the storm water drainage routes during the site visit.

BVNA visited the spill site and drainage areas on February 7, 2017 during a period of heavy precipitation of about an inch of rain within one day. The unlined drainage was observed to be flooded by fast moving water that was about three to four feet deep, most of which was coming from the Sheep Camp valley to the east of the freeway. The 'V'-ditch was observed to have about three to four inches of water flowing toward Koopman Road and into the culvert. The Arroyo was a fast moving river that had flooded the east bank into the unlined drainage area past sample location BV-1. The entire drainage area for this investigation was being heavily scoured.

In a February 2, 2017 email from Mr. Fujita, he stated that the current status of the site investigation was "good."

3.1 SOIL ANALYTICAL RESULTS

Soil analytical results are included in Appendix D and summarized in Table 1. Analytical results were compared to Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs, February 2016) for residential and commercial land use and residential odor nuisance. DRO concentrations were detected in all samples analyzed, but well below regulatory thresholds as follows:

- Total DRO concentrations were detected in all analyzed samples ranging between 2.9 and 34 milligrams per kilogram. Samples prepared using silica gel cleanup had DRO concentrations that ranged from 1.9 to 7.6 mg/kg, indicating that polar hydrocarbons are present in site soils. Analytical results were well below the ESLs for residential shallow soil (230 mg/kg), commercial soil (1,100 mg/kg), and for nuisance odor for residential land use (500 mg/kg).

3.2 QUALITY ASSURANCE/QUALITY CONTROL

The 2016 analytical laboratory data was reviewed by BVNA to establish its validity and to ensure the laboratory data was complete and accurate. BVNA verified that holding time for the analytical method was achieved and



that the laboratory achieved the specific data quality objectives for each selected analytical method. A review of the data validation process indicates that the laboratories completed QA/QC activities required for the samples such as blanks, lab control samples, matrix spikes, and duplicates. No analytical or quality issues were noted in the laboratory analytical reports. The QA/QC parameters for the samples were generally within acceptable limits and suggest that the data is useful for its intended purpose.

4.0 CONCLUSIONS

The finding of low DRO concentrations in the two soil samples collected by BVNA in location BV-1 ranging up to a maximum of 7.6 mg/kg using silica gel cleanup is consistent for a storm water drainage that has upgradient sources from a number of roadways that have been in existence for 50 years or more. DRO concentrations found in the two soil samples from location BV-3 support that the DRO concentrations are likely a result of the 2014 diesel spill. The DRO concentrations in all four analyzed soil samples are well below the ESLs for residential and commercial land use and show a marked degradation with depth indicating that the cleanup activities that occurred in 2014 were effective. The CHES soil and well water samples collected and analyzed in 2014 with reported total DRO concentrations that slightly exceed the ESLs for residential, commercial land use and nuisance odors all had indications that they were aged residuals from prior releases from upgradient non-point sources, likely from the various roadways that have been in existence for multiple decades. The finding of DRO and ORO concentrations in the SFPUC soil sample also indicates sources other than the diesel spill have impacted the drainage. In addition, the spill occurred more than two years ago and the drainage has been well scoured by a number of rain events since then.

The findings of DRO at very low concentrations in soil samples collected for this site investigation and the documents reviewed relating to the cleanup activities following the diesel fuel release, BVNA concludes that the 2014 cleanup activities by CHES were appropriate, and no further remedial action or site investigation is warranted for the Walgreens 2014 diesel fuel release. BVNA requests concurrence that the spill clean-up case be closed.



BVNA appreciates the opportunity to complete this site investigation to address the request for additional technical information by ACEH on behalf of Walgreens. If you have any questions or comments regarding the information provided herein, please do not hesitate to contact us.

This report prepared by:

Donald A. Ashton, P.G., REPA, QSD
Senior Project Manager-Geologist
Health, Safety & Environmental Services



This report reviewed by:

Mark Williams, P.G.
Senior Project Manager
Health, Safety, and Environmental Services

February 15, 2017

Project No. 33115-015204.00



DATA TABLE

TABLE 1
Soil Analytical Results
 9494 Koopman Road
 Sunol, California
 Project No. 33115-015204.00

Sample ID, Depth, Date Analytical Method	BV-1	BV-1	BV-3	BV-3	RWQCB ESL Residential Shallow Soil	RWQCB ESL Commercial Shallow Soil	RWQCB ESL Odor Nuisance- Residential Shallow Soil
	0.5'-1.0'	1.5'-2.0'	0.5'-1.0'	2.0'-2.5'			
	11/22/2016	11/22/2016	11/22/2016	11/22/2016			
Total Petroleum Hydrocarbons as	units: mg/kg						
Total Diesel Range Organics (DRO)	3.1	2.9	34	12	230	1,100	500
DRO with Silica Gel Cleanup	2.3	1.9	7.6	3.2	230	1,100	500

Notes:

Samples reported in milligrams per kilogram (mg/kg)

TPH = Total petroleum hydrocarbons

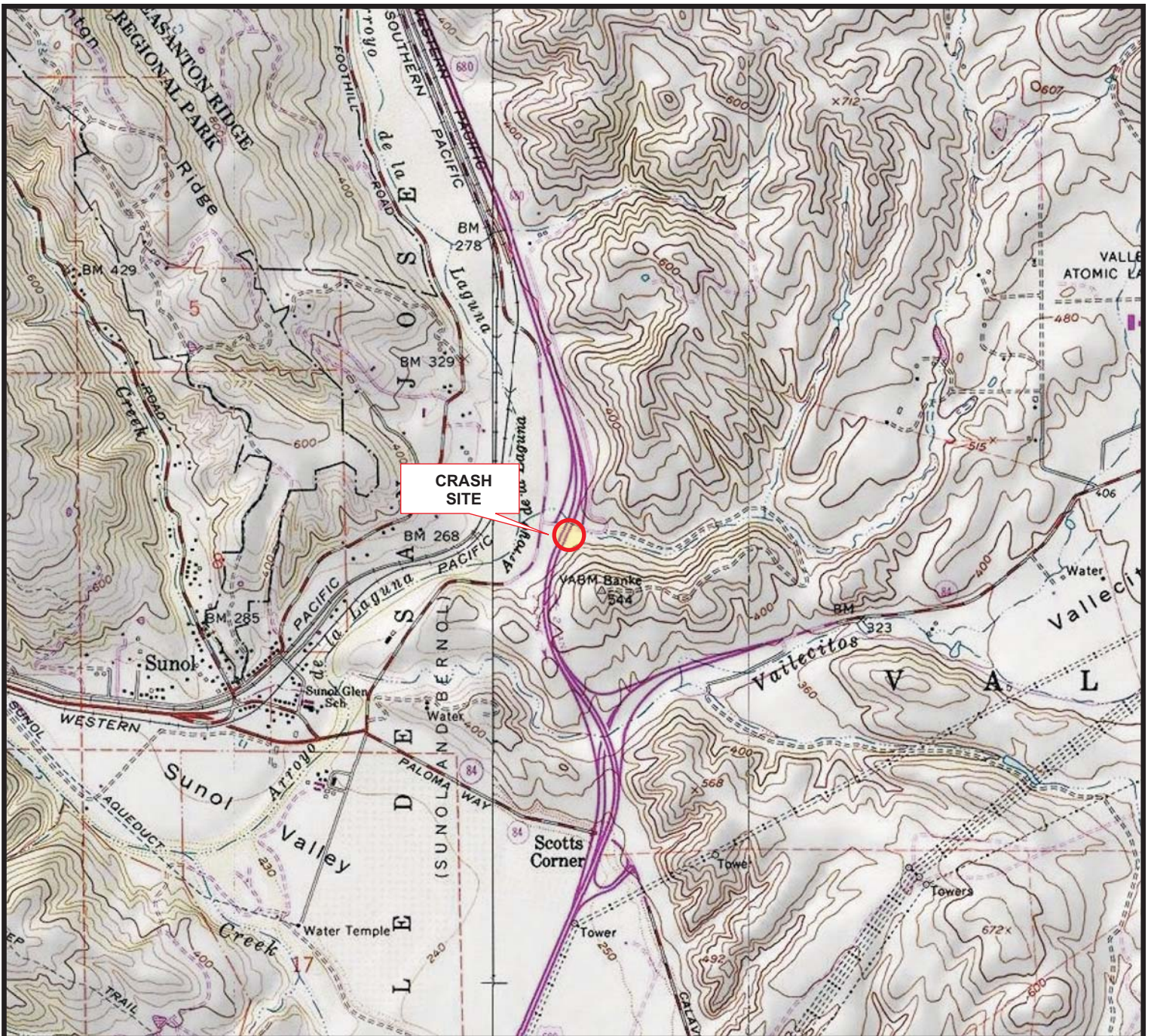
DRO (diesel-range organics) and analyzed by USEPA Method 8015B with and without silica gel cleanup

-- = Not Established

RWQCB ESL = Regional Water Quality Control Board Environmental Screening Levels; Summary of Soil ESLs. February 2016 (Rev. 3)]

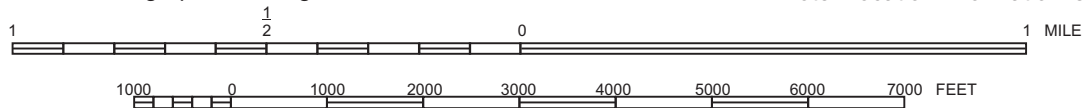


FIGURES



Source: TOPO! © 2000 National Geographic Holdings

Note: Location Information is Approximate



Portion of the 7.5-Minute Series La Costa Valley, California
 Quadrangle Topographic Map (Datum: NAD 83)
 United States Department of the Interior
 Geological Survey
 1996



QUADRANGLE LOCATION

SITE MAP

Koopman Road & I 680
 Sunol, California

Project No. 33115-015204.00

FIGURE

1





Google Imagery Date 10-30-2015

307 ft

LEGEND	WALGREENS SITE INVESTIGATION	FIGURE	
 Oil Absorbent Boom - Approximate Location on 11-22-2014	9494 Koopman Road Sunol, California Project No. 33115-015204.00	<p>2</p>	



APPENDIX A

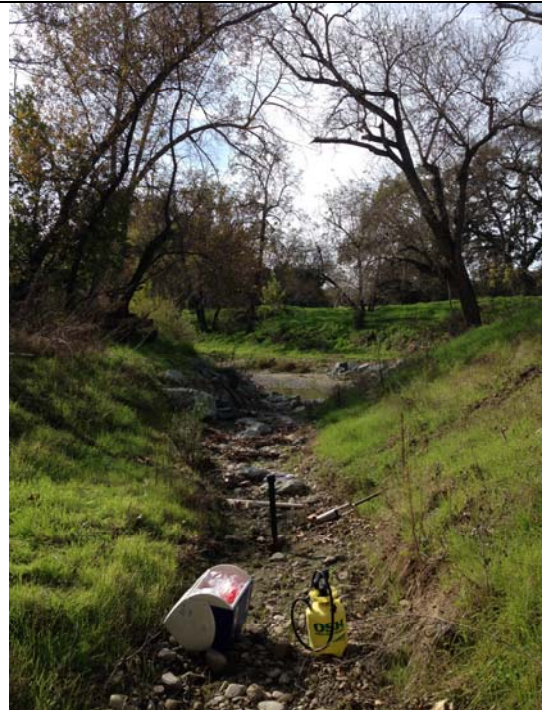
SITE PHOTOGRAPHS – NOVEMBER 22, 2016

CLIENT:	WALGREENS FUEL SPILL SITE INVESTIGATION	PROJECT NO.:	33115-015204.00
LOCATION:	Alameda County Cleanup Program 9494 Koopman Road, Sunol, California	DATE:	November 22, 2016



**PHOTO NO. 1
DESCRIPTION:**

Unlined drainage looking southwest, west side of Sunol-Pleasanton Road. Note old oil boom in ditch. Arroyo del la Laguna is at end of ditch before rise in background.



**PHOTO NO. 2
DESCRIPTION:**

West end of unlined drainage with bank of Arroyo de la Laguna just beyond large rocks in ditch. Verticle handle of core sampler is location of soil samples at BV-1 location



**PHOTO NO. 3
DESCRIPTION:**

V-ditch at Walgreen crash site, west side of I680. View to south. Hand sampling equipment at soil sample location BV-3.



**PHOTO NO. 4
DESCRIPTION:**

Detail view of soil sample location BV-3. Weeds obscure view of depression that resulted from interim remediation that occurred on 11-22-2014 for diesel impacted soil removal.



APPENDIX B

WELL COMPLETION REPORT – SFPUC ARROYO WELL #1

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. XXXXXXX

Page 1 of 1
 Owner's Well Number Arroyo Well #1
 Date Work Began 01/21/14 Date Work Ended 01/25/14
 Local Permit Agency Zone 7 Water Agency
 Permit Number 2013139 Permit Date 11/21/13

DWR Use Only - Do Not Fill In

State Well Number/Site Number _____

Latitude _____ Longitude _____

APN/TRS/Other _____

Geologic Log		
Orientation <input checked="" type="radio"/> Vertical <input type="radio"/> Horizontal <input type="radio"/> Angle Specify _____		
Drilling Method _____ Drilling Fluid _____		
Depth from Surface		Description
Feet to Feet		Describe material, grain size, color, etc.
0	05'	Brown Sand w/ silt
5	12'	Grey Sand and Gravel with some clay
12	25	light Brown Sand with gravel
23'		water showing on Auger
25	35	Grey Rock & River gravel with sand
38	38	Dark grey siltstone
37.5	38	" " "
38	39	Dark grey silty claystone
Total Depth of Boring <u>39</u> Feet		
Total Depth of Completed Well <u>39</u> Feet		

Well Owner

Name S.F.P.U.C
 Mailing Address 525 Golden Gate Ave
 City San Francisco State CA Zip 94102

Well Location

Address West of I-80 Sunol blvd exit
 City Sunol CA County Alameda
 Latitude _____ N Longitude _____ W
 Datum _____ Dec. Lat. _____ Dec. Long. _____
 APN Book 096 Page 0375 Parcel 006-11
 Township _____ Range _____ Section _____



Activity

New Well
 Modification/Repair
 Deepen
 Other _____
 Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

Water Supply
 Domestic Public
 Irrigation Industrial
 Cathodic Protection
 Dewatering
 Heat Exchange
 Injection
 Monitoring
 Remediation
 Sparging
 Test Well
 Vapor Extraction
 Other _____

Water Level and Yield of Completed Well

Depth to first water 23' (Feet below surface)
 Depth to Static _____
 Water Level 21.5 (Feet) Date Measured 6/16/14
 Estimated Yield * 35 (GPM) Test Type Pump
 Test Length 4 hrs (Hours) Total Drawdown .5 (Feet)
 *May not be representative of a well's long term yield.

Casings							
Depth from Surface	Borehole Diameter	Type	Material	Wall Thickness	Outside Diameter	Screen Type	Slot Size if Any
Feet to Feet	(Inches)			(Inches)	(Inches)		(Inches)
0	24	20"	Casing	PVC	Sch 80	9"	-
24	34	20	screen	Stainless	wirewrap	9"	wirewrap .010
38	39	20	CAP	Sch 80 Cap	Sch 80	9"	Cap

Annular Material			
Depth from Surface	Fill	Description	
Feet to Feet			
24	23.5	Seal	3/8 Bentonite
23.5	0	Seal	Neat Cement
26.0	39	Gravel Pack	Med. Aquarium

Attachments

Geologic Log
 Well Construction Diagram
 Geophysical Log(s)
 Soil/Water Chemical Analyses
 Other _____

Attach additional information, if it exists.

Certification Statement

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief

Name Cowhey Pacific Drilling Inc
Person, Firm or Corporation
1215 Michigan Ave San Francisco CA 94107
Address City State Zip
 Signed [Signature] 2/15/14 351525
C-57 Licensed Water Well Contractor Date Signed C-57 License Number



APPENDIX C

LABORATORY ANALYTICAL REPORTS SFPUC SAMPLES 12-10-2014



Analytical Report

Eurofins Eaton Analytical, Inc
750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629

Date Received: 12/12/14
Work Order: 14-12-1288
Preparation: EPA 3510C
Method: EPA 8015B (M)
Units: ug/L

Project: 512087

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
201412120216 - Wellhead	14-12-1288-5-A	12/10/14 12:00	Aqueous	GC 48	12/16/14	12/17/14 05:03	141216B05

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Motor Oil	ND	250	210	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	110	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
201412120217 - Tank	14-12-1288-6-A	12/10/14 12:20	Aqueous	GC 48	12/16/14	12/17/14 05:19	141216B05

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Motor Oil	ND	250	210	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	108	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-15-278-780	N/A	Aqueous	GC 48	12/16/14	12/17/14 02:23	141216B05

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Motor Oil	ND	250	210	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	101	68-140	

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



Calscience

Analytical Report

Eurofins Eaton Analytical, Inc
750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629

Date Received: 12/12/14
Work Order: 14-12-1288
Preparation: EPA 3510C
Method: EPA 8015B (M)
Units: ug/L

Project: 512087

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
201412120216 - Wellhead	14-12-1288-5-A	12/10/14 12:00	Aqueous	GC 48	12/16/14	12/17/14 05:03	141216B04

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Diesel	ND	50	11	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	110	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
201412120217 - Tank	14-12-1288-6-A	12/10/14 12:20	Aqueous	GC 48	12/16/14	12/17/14 05:19	141216B04

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Diesel	ND	50	11	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	108	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-15-304-894	N/A	Aqueous	GC 48	12/16/14	12/17/14 02:23	141216B04

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Diesel	ND	50	11	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	101	68-140	

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



Calscience

Analytical Report

Eurofins Eaton Analytical, Inc
750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629

Date Received: 12/12/14
Work Order: 14-12-1288
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: 512087

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
201412120218 - <i>ecc on fall (soil)</i>	14-12-1288-7-A	12/10/14 11:57	Solid	GC 47	12/12/14	12/15/14 13:07	141212B13

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Motor Oil	590	250	70	10.0	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	64	61-145	

Method Blank	089-15-420-1167	N/A	Solid	GC 47	12/12/14	12/12/14 14:16	141212B13
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Motor Oil	ND	25	7.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	78	61-145	

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



Calscience

Analytical Report

Eurofins Eaton Analytical, Inc
750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629

Date Received: 12/12/14
Work Order: 14-12-1288
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: 512087

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
201412120218 - SEC outfall (soil)	14-12-1288-7-A	12/10/14 11:57	Solid	GC 47	12/12/14	12/15/14 13:07	141212B12

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Diesel	250	50	16	10.0	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	64	61-145	

Method Blank	099-15-422-1531	N/A	Solid	GC 47	12/12/14	12/12/14 14:16	141212B12
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.6	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	78	61-145	

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



APPENDIX D

LABORATORY ANALYTICAL REPORTS
BVNA SAMPLES 11-22-2016

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: 720-75992-1
Client Project/Site: Ches-Walgreen 33115-015204.00

For:
Bureau Veritas North America, Inc.
Bishop Ranch 6
2430 Camino Ramon Suite 122
San Ramon, California 94583

Attn: Don Ashton



Authorized for release by:
11/29/2016 4:22:52 PM

Paloma Duong, Project Manager I
(925)484-1919
paloma.duong@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.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.

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Definitions/Glossary

Client: Bureau Veritas North America, Inc.
Project/Site: Ches-Walgreen 33115-015204.00

TestAmerica Job ID: 720-75992-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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)

Case Narrative

Client: Bureau Veritas North America, Inc.
Project/Site: Ches-Walgreen 33115-015204.00

TestAmerica Job ID: 720-75992-1

Job ID: 720-75992-1

Laboratory: TestAmerica Pleasanton

Narrative

**Job Narrative
720-75992-1**

Comments

No additional comments.

Receipt

The samples were received on 11/22/2016 3:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 19.9° C.

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.

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Detection Summary

Client: Bureau Veritas North America, Inc.
Project/Site: Ches-Walgreen 33115-015204.00

TestAmerica Job ID: 720-75992-1

Client Sample ID: BV-1 0.5-1.0'

Lab Sample ID: 720-75992-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	3.1		0.99		mg/Kg	1		8015B	Total/NA
Diesel Range Organics [C10-C28]	2.3		0.99		mg/Kg	1		8015B	Silica Gel Cleanup

Client Sample ID: BV-1 1.5-2.0'

Lab Sample ID: 720-75992-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	2.9		0.99		mg/Kg	1		8015B	Total/NA
Diesel Range Organics [C10-C28]	1.9		0.99		mg/Kg	1		8015B	Silica Gel Cleanup

Client Sample ID: BV-3 0.5-1.0'

Lab Sample ID: 720-75992-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	34		0.99		mg/Kg	1		8015B	Total/NA
Diesel Range Organics [C10-C28]	7.6		0.99		mg/Kg	1		8015B	Silica Gel Cleanup

Client Sample ID: BV-3 2.0-2.5'

Lab Sample ID: 720-75992-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	12		0.98		mg/Kg	1		8015B	Total/NA
Diesel Range Organics [C10-C28]	3.2		0.98		mg/Kg	1		8015B	Silica Gel Cleanup

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Client Sample Results

Client: Bureau Veritas North America, Inc.
 Project/Site: Ches-Walgreen 33115-015204.00

TestAmerica Job ID: 720-75992-1

Client Sample ID: BV-1 0.5-1.0'

Lab Sample ID: 720-75992-1

Date Collected: 11/22/16 12:22

Matrix: Solid

Date Received: 11/22/16 15:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	3.1		0.99		mg/Kg		11/25/16 09:50	11/28/16 11:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>p-Terphenyl</i>	93		40 - 130				11/25/16 09:50	11/28/16 11:03	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	2.3		0.99		mg/Kg		11/26/16 09:28	11/28/16 15:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>Capric Acid (Surr)</i>	0		0 - 1				11/26/16 09:28	11/28/16 15:30	1
<i>p-Terphenyl</i>	91		38 - 148				11/26/16 09:28	11/28/16 15:30	1

Client Sample Results

Client: Bureau Veritas North America, Inc.
 Project/Site: Ches-Walgreen 33115-015204.00

TestAmerica Job ID: 720-75992-1

Client Sample ID: BV-1 1.5-2.0'

Lab Sample ID: 720-75992-2

Date Collected: 11/22/16 12:40

Matrix: Solid

Date Received: 11/22/16 15:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	2.9		0.99		mg/Kg		11/25/16 09:50	11/28/16 11:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	94		40 - 130				11/25/16 09:50	11/28/16 11:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	1.9		0.99		mg/Kg		11/26/16 09:28	11/28/16 15:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0		0 - 1				11/26/16 09:28	11/28/16 15:59	1
p-Terphenyl	90		38 - 148				11/26/16 09:28	11/28/16 15:59	1

Client Sample Results

Client: Bureau Veritas North America, Inc.
 Project/Site: Ches-Walgreen 33115-015204.00

TestAmerica Job ID: 720-75992-1

Client Sample ID: BV-3 0.5-1.0'

Lab Sample ID: 720-75992-5

Date Collected: 11/22/16 14:15

Matrix: Solid

Date Received: 11/22/16 15:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	34		0.99		mg/Kg		11/25/16 09:50	11/26/16 15:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	98		40 - 130				11/25/16 09:50	11/26/16 15:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	7.6		0.99		mg/Kg		11/26/16 09:28	11/28/16 16:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.2		0 - 1				11/26/16 09:28	11/28/16 16:57	1
p-Terphenyl	67		38 - 148				11/26/16 09:28	11/28/16 16:57	1

Client Sample Results

Client: Bureau Veritas North America, Inc.
 Project/Site: Ches-Walgreen 33115-015204.00

TestAmerica Job ID: 720-75992-1

Client Sample ID: BV-3 2.0-2.5'

Lab Sample ID: 720-75992-6

Date Collected: 11/22/16 14:23

Matrix: Solid

Date Received: 11/22/16 15:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	12		0.98		mg/Kg		11/25/16 09:50	11/28/16 12:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>p-Terphenyl</i>	69		40 - 130				11/25/16 09:50	11/28/16 12:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	3.2		0.98		mg/Kg		11/26/16 09:28	11/28/16 16:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>Capric Acid (Surr)</i>	0.04		0 - 1				11/26/16 09:28	11/28/16 16:28	1
<i>p-Terphenyl</i>	80		38 - 148				11/26/16 09:28	11/28/16 16:28	1

QC Sample Results

Client: Bureau Veritas North America, Inc.
 Project/Site: Ches-Walgreen 33115-015204.00

TestAmerica Job ID: 720-75992-1

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

Lab Sample ID: MB 720-213696/1-A
Matrix: Solid
Analysis Batch: 213752

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 213696

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		11/25/16 09:50	11/26/16 13:24	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	47		40 - 130				11/25/16 09:50	11/26/16 13:24	1

Lab Sample ID: LCS 720-213696/2-A
Matrix: Solid
Analysis Batch: 213752

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 213696

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits		
Diesel Range Organics [C10-C28]	83.3	74.2		mg/Kg		89	50 - 150		
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
p-Terphenyl	118		40 - 130						

Lab Sample ID: MB 720-213756/1-A
Matrix: Solid
Analysis Batch: 213752

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 213756

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		11/26/16 09:28	11/26/16 18:38	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.004		0 - 1				11/26/16 09:28	11/26/16 18:38	1
p-Terphenyl	86		38 - 148				11/26/16 09:28	11/26/16 18:38	1

Lab Sample ID: LCS 720-213756/2-A
Matrix: Solid
Analysis Batch: 213752

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 213756

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits		
Diesel Range Organics [C10-C28]	83.3	57.9		mg/Kg		69	36 - 112		
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
p-Terphenyl	71		38 - 148						

QC Association Summary

Client: Bureau Veritas North America, Inc.
 Project/Site: Ches-Walgreen 33115-015204.00

TestAmerica Job ID: 720-75992-1

GC Semi VOA

Prep Batch: 213696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-75992-1	BV-1 0.5-1.0'	Total/NA	Solid	3546	
720-75992-2	BV-1 1.5-2.0'	Total/NA	Solid	3546	
720-75992-5	BV-3 0.5-1.0'	Total/NA	Solid	3546	
720-75992-6	BV-3 2.0-2.5'	Total/NA	Solid	3546	
MB 720-213696/1-A	Method Blank	Total/NA	Solid	3546	
LCS 720-213696/2-A	Lab Control Sample	Total/NA	Solid	3546	

Analysis Batch: 213752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 720-213696/1-A	Method Blank	Total/NA	Solid	8015B	213696
MB 720-213756/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	213756
LCS 720-213696/2-A	Lab Control Sample	Total/NA	Solid	8015B	213696
LCS 720-213756/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	213756

Analysis Batch: 213753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-75992-5	BV-3 0.5-1.0'	Total/NA	Solid	8015B	213696

Prep Batch: 213756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-75992-1	BV-1 0.5-1.0'	Silica Gel Cleanup	Solid	3546	
720-75992-2	BV-1 1.5-2.0'	Silica Gel Cleanup	Solid	3546	
720-75992-5	BV-3 0.5-1.0'	Silica Gel Cleanup	Solid	3546	
720-75992-6	BV-3 2.0-2.5'	Silica Gel Cleanup	Solid	3546	
MB 720-213756/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	
LCS 720-213756/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	

Analysis Batch: 213776

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-75992-1	BV-1 0.5-1.0'	Silica Gel Cleanup	Solid	8015B	213756
720-75992-1	BV-1 0.5-1.0'	Total/NA	Solid	8015B	213696
720-75992-2	BV-1 1.5-2.0'	Silica Gel Cleanup	Solid	8015B	213756
720-75992-2	BV-1 1.5-2.0'	Total/NA	Solid	8015B	213696
720-75992-5	BV-3 0.5-1.0'	Silica Gel Cleanup	Solid	8015B	213756
720-75992-6	BV-3 2.0-2.5'	Silica Gel Cleanup	Solid	8015B	213756
720-75992-6	BV-3 2.0-2.5'	Total/NA	Solid	8015B	213696

Lab Chronicle

Client: Bureau Veritas North America, Inc.
Project/Site: Ches-Walgreen 33115-015204.00

TestAmerica Job ID: 720-75992-1

Client Sample ID: BV-1 0.5-1.0'

Date Collected: 11/22/16 12:22

Date Received: 11/22/16 15:10

Lab Sample ID: 720-75992-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Silica Gel Cleanup	Prep	3546			213756	11/26/16 09:28	NAW	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	213776	11/28/16 15:30	JXL	TAL PLS
Total/NA	Prep	3546			213696	11/25/16 09:50	RAC	TAL PLS
Total/NA	Analysis	8015B		1	213776	11/28/16 11:03	JXL	TAL PLS

Client Sample ID: BV-1 1.5-2.0'

Date Collected: 11/22/16 12:40

Date Received: 11/22/16 15:10

Lab Sample ID: 720-75992-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Silica Gel Cleanup	Prep	3546			213756	11/26/16 09:28	NAW	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	213776	11/28/16 15:59	JXL	TAL PLS
Total/NA	Prep	3546			213696	11/25/16 09:50	RAC	TAL PLS
Total/NA	Analysis	8015B		1	213776	11/28/16 11:32	JXL	TAL PLS

Client Sample ID: BV-3 0.5-1.0'

Date Collected: 11/22/16 14:15

Date Received: 11/22/16 15:10

Lab Sample ID: 720-75992-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Silica Gel Cleanup	Prep	3546			213756	11/26/16 09:28	NAW	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	213776	11/28/16 16:57	JXL	TAL PLS
Total/NA	Prep	3546			213696	11/25/16 09:50	RAC	TAL PLS
Total/NA	Analysis	8015B		1	213753	11/26/16 15:25	DCH	TAL PLS

Client Sample ID: BV-3 2.0-2.5'

Date Collected: 11/22/16 14:23

Date Received: 11/22/16 15:10

Lab Sample ID: 720-75992-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Silica Gel Cleanup	Prep	3546			213756	11/26/16 09:28	NAW	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	213776	11/28/16 16:28	JXL	TAL PLS
Total/NA	Prep	3546			213696	11/25/16 09:50	RAC	TAL PLS
Total/NA	Analysis	8015B		1	213776	11/28/16 12:02	JXL	TAL PLS

Laboratory References:

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

Certification Summary

Client: Bureau Veritas North America, Inc.
Project/Site: Ches-Walgreen 33115-015204.00

TestAmerica Job ID: 720-75992-1

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	01-31-18

- 1
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Method Summary

Client: Bureau Veritas North America, Inc.
Project/Site: Ches-Walgreen 33115-015204.00

TestAmerica Job ID: 720-75992-1

Method	Method Description	Protocol	Laboratory
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: Bureau Veritas North America, Inc.
Project/Site: Ches-Walgreen 33115-015204.00

TestAmerica Job ID: 720-75992-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-75992-1	BV-1 0.5-1.0'	Solid	11/22/16 12:22	11/22/16 15:10
720-75992-2	BV-1 1.5-2.0'	Solid	11/22/16 12:40	11/22/16 15:10
720-75992-5	BV-3 0.5-1.0'	Solid	11/22/16 14:15	11/22/16 15:10
720-75992-6	BV-3 2.0-2.5'	Solid	11/22/16 14:23	11/22/16 15:10

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- 14

720-75992

172 986

CHAIN OF CUSTODY

Lab: TAL

TAT: Standard



Report results to:

Name: Don Ashton
 Company: Bureau Veritas
 Mailing Address: 2430 Camino Ramon, Suite 122
 City, State, Zip: San Ramon, California 94583
 Telephone No.: (925) 426-2600 Drct: (925) 426-2679
 Fax No.: (925) 426-0106
 Email: Don.Ashton@us.bureauveritas.com

Project Information
 Project No. 33115-015204.00
 Name: CHES - WHL GREEN
 Location: SANDS

Special Instructions and/or specific regulatory requirements:

Global ID: 71000000

EDD Report for Geotracker: Yes No

Sample Identification	Date Sampled	Time Sampled	Matrix/Media	No. of Cons	Analyses Requested	Sample Condition/Comments	Preservative
BV-1 0.5-10'	11-22-2016	1222	SOIL	1	TEPH EPA 8015B TEPH EPA 8015B SILICA GEL	HOLD	ICE
BV-1 1.5-2.0'		1240					
BV-2 0.5-1.0'		1255					
BV-2 1.5-2.0'		1315					
BV-3 0.5-1.0'		1415					
BV-3 2.0-2.5'		1423					



720-75992 Chain of Custody

Yes No

19.9°C

Collected by: Don Ashton
 Relinquished by: Don Ashton
 Date/Time: 11-22-16 15:10

Collector's Signature: [Signature]
 Received by: [Signature]
 Date/Time: 11-22-16 15:10

Login Sample Receipt Checklist

Client: Bureau Veritas North America, Inc.

Job Number: 720-75992-1

Login Number: 75992
List Number: 1
Creator: Arauz, Dennis

List Source: TestAmerica Pleasanton

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 (excluding tests with immediate HTs)	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	

