Jurek, Anne, Env. Health

From: mark.williams@us.bureauveritas.com
Sent: Wednesday, May 18, 2016 4:18 PM
To: Jurek, Anne, Env. Health
Subject: 1800 Powell, Emeryville, CA
Attachments: Attempted well install report -PDF.zip; ERC_R_2014_02_19 RO254-pdf.zip; 013181-Fig2a-pdf.zip

Anne

here is one of the previous reports where Shell attempted to install a well. Our current work plan had wells down gradient but on the south side of the street. Due to the proximity to the bay, this area has been nearly impossible to get approval from the coastal commission to install a well or access due to the utilities in the road and sidewalk.

Therefore we are back to installing on the site. The issue is that there are too many utility lines south of the former line location. There is a large PG&E line near the edge of the property that we need to stay 5 feet from. That being said, excavation around the area of the line break occurred in 2014 during the station upgrade as noted in the attached report and confirmation samples were collected.

Let me know what you thoughts are after having a chance to review the data and reports for the site.

(See attached file: Attempted well install report -PDF.zip)

(See attached file: ERC_R_2014_02_19 RO254-pdf.zip)

(See attached file: 013181-Fig2a-pdf.zip)

Mark Williams, CAC, P.G.
Environmental Site Investigation and Remediation Manager
Bureau Veritas North America, Inc.
Health, Safety, and Environmental Services
2430 Camino Ramon, Suite 122, San Ramon, California 94583
p: 925.426.2676, c: 925.858.5990, f: 925.426.0106
mark.williams@us.bureauveritas.com
www.us.bureauveritas.com

Management Systems Global Certifications:
ISO 9001:2008 – Quality ● ISO 14001:2004 – Environmental ●HSAS 18001:2007 –Health & Safety

Please consider the environment before printing this e-mail

Denis L. Brown
Shell Oil Products US
HSE – Environmental Services
20945 S. Wilmington Ave.
Carson, CA 90810-1039
Tel (707) 865 0251
Fax (707) 865 2542
Email denis.l.brown@shell.com

Mr. Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94205-6577

Re: Shell-branded Service Station
1800 ½ Powell Street
Emeryville, California
SAP Code 135266
Incident No. 98995349
ACEH Case No. RO0000254

Dear Mr. Wickham:

The attached document is provided for your review and comment. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

As always, please feel free to contact me directly at (707) 865-0251 with any questions or concerns.

Sincerely,

Denis L. Brown
Senior Program Manager

CONESTOGA-ROVERS
& ASSOCIATES

5900 Hollis Street, Suite A, Emeryville, Calfornia 94608
Telephone: 510-420-0700 Facsimile: 510-420-9170
www.CRAworld.com

January 13, 2012

Reference No. 240894

Mr. Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Dear Mr. Wickham:

Re: Attempted Well Reinstallation
Shell-branded Service Station
1800½ Powell Street
Emeryville, California
SAP Code 135266
Incident No. 98995349
Agency No. RO0000254

Conestoga-Rovers & Associates (CRA) prepared this letter on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) to describe our attempt to reinstall one on-site well (S-9) as conditionally approved in Alameda County Environmental Health's (ACEH's) June 27, 2011 letter. ACEH's October 11, 2011 electronic correspondence extended the due date for a report from October 20, 2011 to January 18, 2012. The site location is shown on Figure 1, and the site layout including the well location is shown on Figure 2.

CRA's June 2, 2011 *Subsurface Investigation Work Plan* proposed installing one well to replace groundwater monitoring well S-9 or reinstalling the well at its current location. Based on utility locations marked by Underground Service Alert (USA) member organizations and a private utility locator retained by CRA, CRA could not find any possible location to safely install a replacement well, and encroaching utilities were too close to the current well location to allow the well to be reinstalled safely. The attached photographs show the utilities marked by USA member organizations and the private utility locator.

Please call Peter Schaefer at (510) 420-3319 if you have any questions or comments.

Yours truly,

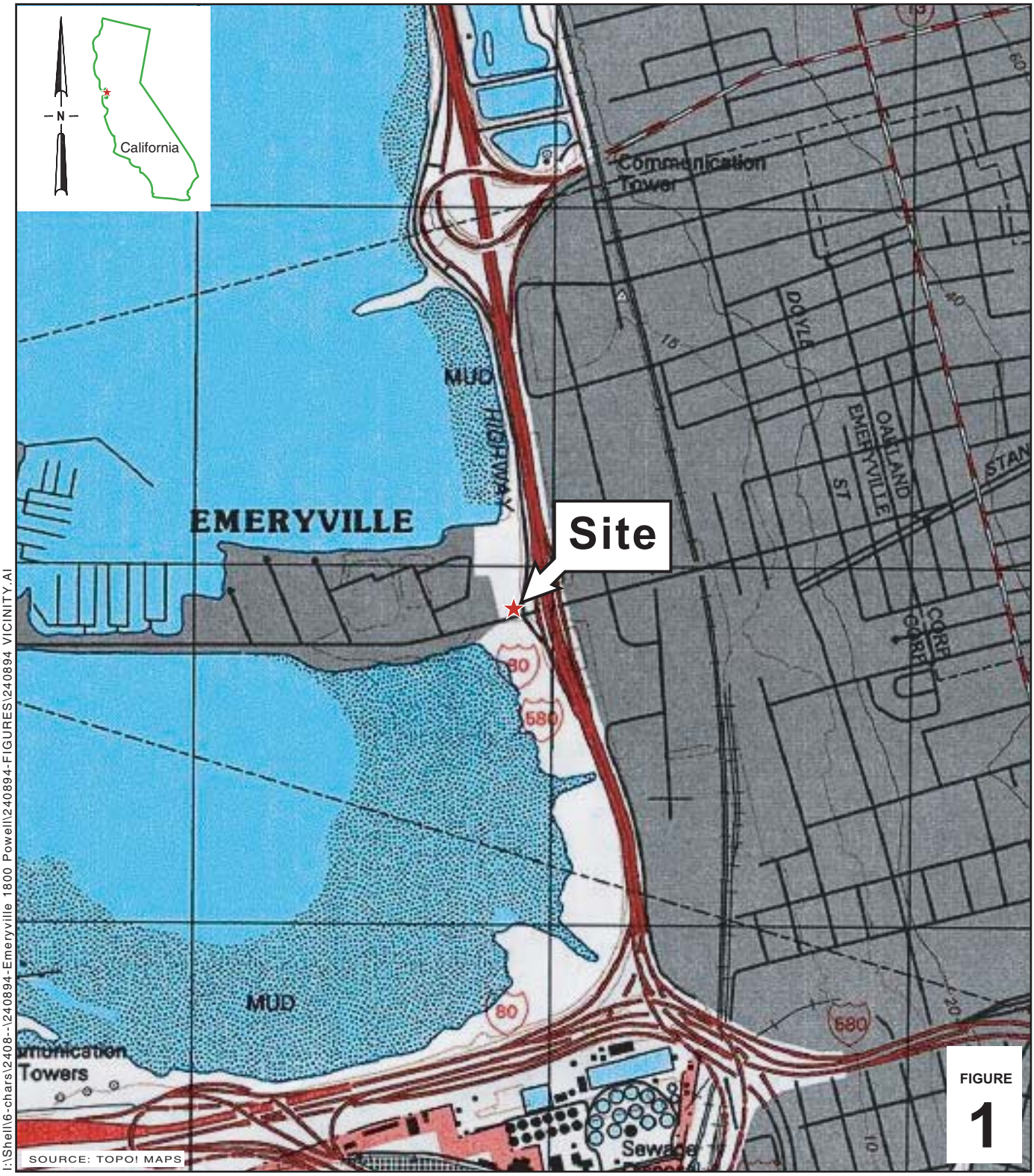
CONESTOGA-ROVERS & ASSOCIATES

Peter Schaefer, CEG, CHG

PS/bc/2
Enclosures

c.c.: Denis Brown, Shell Oil Products US (electronic copy)
Au Energy LLC, c/o Nick Goyle, Vintners Distributors, Inc., 41805 Albrae Street, 2nd Floor, Fremont, CA 94538

01/13/09



I:\Shell\6-chars\2408--\240894-Emeryville 1800 Powell\240894-FIGURES\240894 VICINITY.AI

FIGURE
1

0 1/8 1/4 1/2 1

SCALE : 1" = 1/4 MILE

Shell-branded Service Station

1800 1/2 Powell Street

Emeryville, California

CONESTOGA-ROVERS & ASSOCIATES

Vicinity Map

11/16/2011

EXPLANATION

- S-5 — Monitoring well location
- S-6 — Destroyed monitoring well location
- S-1/A — Tank backfill well location

0 15 30 60

Scale (ft)

N

Holiday Inn
Hotel Building
1800 Powell

Hotel
Parking Lot

Hotel
Parking Lot

Shell Station
1800 1/2 Powell

Planter
Planter
Planter
Planter
Planter
Planter
Planter

Car
Wash

Dispenser
Islands

Dispenser
Islands

Dispenser
Islands

Marketeer
Building

Trash

Canopy

USTs

Driveway
Driveway
Driveway
Driveway

Traffic Island

FRONTAGE ROAD

POWELL STREET

S-1/A
S-2/E
S-3/B
S-4/C
S-5
S-6
S-7
S-8
S-9
S-10
S-11/D
S-12
S-13
S-14

I:\Shell\6-chars\2408--\240894-Emeryville 1800 Powell\240894-FIGURES\240894 SITE PLAN.DWG

Site Plan

Shell-branded Service Station
1800 1/2 Powell Street
Emeryville, California

FIGURE
2

CONESTOGA-ROVERS & ASSOCIATES

Figure 3

Utilities at S-9 - Facing Southwest
Shell-branded Service Station
1800 1/2 Powell Street
Emeryville, California

I:\Shell\6-chars\2408--\240894-Emeryville 1800 Powell\240894-FIGURES\240894 UTILITY PHOTOS (F3).DWG (12/26/2011)

Figure 4

Utilities Near S-9 - Facing Southeast
Shell-branded Service Station
1800 1/2 Powell Street
Emeryville, California

I:\Shell\6-chars\2408--\240894-Emeryville 1800 Powell\240894-FIGURES\240894 UTILITY PHOTOS (F4).DWG (12/26/2011)

Figure 5

Utilities at S-9 - Facing West
Shell-branded Service Station
1800 1/2 Powell Street
Emeryville, California

I:\Shell\6-chars\2408--\240894-Emeryville 1800 Powell\240894-FIGURES\240894 UTILITY PHOTOS (F5).DWG (12/26/2011)

Figure 6

Utilities Near S-9 - Facing East
Shell-branded Service Station
1800 1/2 Powell Street
Emeryville, California

I:\Shell\6-chars\2408--\240894-Emeryville 1800 Powell\240894-FIGURES\240894 UTILITY PHOTOS (F6).DWG (12/26/2011)

February 19, 2015

Sunny Goyal
Vintners Distributors Inc.
41805 Albrae Street
Fremont, CA 94538

Mr. Jerry Wickham
ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Interim Removal Action Report
1800 ½ Powell Street, Emeryville, California, APN 049 -1495-001-12
Case No. RO0000254; GeoTracker Global ID: T0600101231

Dear Mr. Wickham:

Au Energy, LLC (Au Energy, the *responsible party*), is submitting the enclosed report summarizing the excavation work around the former diesel line leak. This report was prepared by Bureau Veritas North America, Inc. (BVNA) on behalf of AU Energy, LLC.

I declare, under penalty of perjury, that the information contained in the attached enclosed Work Plan is true and correct to the best of my knowledge. If you have any comments or questions regarding this report, please do not hesitate to contact Mark Williams or John Werfal of BVNA. Their contact information is provided in the Work Plan.

Sincerely,

Sunny Goyal
Au Energy Director

February 19, 2015

Mr. Sunny Goyal
AU ENERGY
41805 Albrae Street, 2nd Floor
Fremont, California 94538

Project No. 33113-013181.00

Subject: *Interim Removal Action Report*
1800 ½ Powell Street
Emeryville, Alameda County, California

Dear Mr. Goyal:

Bureau Veritas North America, Inc. is pleased to present this report summarizing the excavation efforts around the former diesel line leak at the above-referenced property.

If you have any questions or comments regarding the information provided herein, please do not hesitate to contact me.

Sincerely,

Mark Williams, PG
Senior Project Geologist
Health, Safety and Environmental Services
mark.williams@us.bureauveritas.com
(925) 426-2676

Enclosure

Interim Removal Action Report

Shell-Branded Station
1800 ½ Powell Street
Emeryville, Alameda County, California

February 19, 2015
Project No. 33114-013181.00

Prepared for
AU ENERGY
41805 Albrae Street, 2nd Floor
Fremont, California

For the benefit of business and people

Bureau Veritas North America, Inc.
2430 Camino Ramon, Suite 122
San Ramon, California 94583
925.426.2600
www.us.bureauveritas.com

CONTENTS

Section **Page**

Tables

Figures

Appendices

1.0 INTRODUCTION

Bureau Veritas North America, Inc. (BVNA) is pleased to present this Interim Removal Action Report for the above-referenced property (the "Site," Figures 1 and 2).

In 2013, BVNA was retained to collect soil samples for initial waste characterization prior to the planned redevelopment activities. During that work, a subsurface fiberglass diesel fuel product line was apparently damaged. Up to approximately 3 inches of separate phase hydrocarbon (SPH) was measured in two of the underground storage tank (UST) backfill observation wells (S-2/E, S-3/B) following the line damage, and was removed utilizing a vacuum truck. Approximately 5,000 gallons of water/SPH mixture were removed for offsite disposal.

In May through June 2014, three gasoline USTs, and one diesel UST were removed from the site as well as impacted soil, fill materials and pea gravel around the former USTs. The removal of these USTs is documented in a report entitled *Underground Storage Tank Removal Report* dated August 11, 2014, and prepared by Sparger Technology Inc. The extent of excavated soils, fill materials, and pea gravel fill around the former USTs ranged from at least 45 feet by 65 feet long to 12 feet in depth.

2.0 SCOPE OF WORK

The proposed extent of excavation presented in the May 19, 2014 diesel line excavation workplan was anticipated to be at least 20 feet by 25 feet laterally. A response from the Alameda County Health Care Services Agency (ACHCSA) dated May 20, 2014, stated that the line leakage may have impacted a larger area than proposed, and requested that the excavation be expanded to remove observed diesel contamination where feasible. This scope of work was conducted using the expanded excavation of visibly impacted material approach as guidance.

2.1 PRE-FIELD ACTIVITIES

Prior to the excavation of the soils, the former dispenser island areas and diesel line path to the UST excavation was survey and located in the field using white marking paint. Notifications were placed to the ACHCA prior to conducting the soils removal work and in anticipation of the soil confirmation sampling.

2.2 FIELD ACTIVITIES

The following is a summary of the field activities.

2.2.1 Excavation Activities

On June 20 - 26, 2014, NCM/LVI Services under contract with Wendt Construction performed the excavation work using a long reach excavator, and directly loaded the diesel impacted soil and fill materials into lined -trucks for disposal at Forward Landfill in Manteca California.

Subsurface materials encountered during this excavation work included silty clays to clays mixed with a significant amount of fill materials and debris. This debris included roofing materials, shingles, insulation, wood, brick debris, glass, gravel, and trash debris. During the excavation, the impacted gravel fill in the

former diesel line trench was observed and excavated as well as the visibly diesel- impacted fill materials. Soils were removed laterally and vertically to a point where there was no visible diesel fuel impact in the sidewalls or base of the excavation.

Soils and fill materials were removed in a westerly direction from the former diesel line break to a point where no visible impact was observed. This included soils below both former dispenser islands locations. Soils to the south were removed to the extent possible. The lateral direction of this side of the excavation was constrained by the nearby Pacific, Gas and Electric utility line. However, at the edge of this side of the excavation, little to no visible diesel impact was observed. Soils to the north were removed to a point where little to no diesel impact was observed in the remaining soil/fill materials. Soils to the east were removed laterally to the point of contact with the west side of the former UST excavation area which was previously excavated, but had been backfilled at that point.

The depth of the excavation ranged from 5 to 6 feet deep. Roofing materials which included tar shingles and tar paper were encountered throughout the excavation, but did not appear impacted with diesel fuel at the base of the excavation below 5 to 6 feet in depth. The fill materials which appeared impacted with by the diesel release were removed above this depth. Based on the UST removal work conducted on the site, these fill materials extended to depths of 10 to 12 feet in the area of the former USTs. No base samples were collected in the diesel line excavation area, since the materials at the base of the excavation consisted primarily of roof shingles and tar paper debris and likely extended to depths of at least 12 feet. Furthermore, these fill materials did not appear impacted with diesel fuel unlike the materials which were removed at shallower depths.

The lateral extent of excavation ranged from 10 to 12 feet wide, and 40 to 50 feet long. Figure 2 depicts the location and graphical extent of the diesel line excavation. The red lined area presents a depiction of the excavation by June 23, 2014. Based on the sample results, the excavation was further widened on the north, west, southwest and east sides. On June 26, 2014, two additional confirmation samples were collected to represent the remaining soils at the edges of the excavation. This additional excavated area is noted as a blue line on Figure 2 which shows the expanded areas from the first excavated area.

2.2.2 Soil Confirmation Sampling

On June 23, 2014 under the direction of the ACHCA, four soil confirmation samples were collected from the sides of the excavation. Based on the data, additional soils were excavated as noted above, and two additional confirmation samples were then collected on June 26, 2014. The soil sample analytical results are summarized in Table 1.

3.0 LABORATORY ANALYSES

The soil samples were submitted to a State-certified laboratory for chemical analysis by the following United States Environmental Protection Agency (USEPA) Methods as required by ACHCA:

- TPH as gasoline (TPH-g), BTEX, EDB, EDC, MTBE, TAME, ETBE, DIPE, TBA and EtOH by Method 8260B
- TPH-diesel and TPH as motor oil (TPH-d & TPH-mo) by Method 8015M

- Naphthalene by Method 8270

4.0 FINDINGS

BVNA evaluated the data generated during this investigation. Our findings are summarized in the following subsections.

4.1 SOIL ANALYTICAL RESULTS

A summary of soil analytical results is provided in Table 1. Copies of the soil analytical laboratory reports are presented in Appendix B. Areas represented by the confirmation samples DE-1N, DE-1E, and DE-1W were further excavated after the sample results were available. Once the additional excavation work was completed, two confirmation samples were collected: DE-2E and DE-2W. It should be noted that the area north of DE-1N were further excavated and that the remaining soils on the north side of the excavation were visibly similar to the soils which were represented by DE-2W.

Soil analytical data were compared to the Environmental Screening Levels (ESLs) which were established by the RWQCB – San Francisco Region, Table A – Shallow Soils for commercial uses, December 2013. The analyzed constituents detected in DE-1S, DE-2W and DE-2E are summarized as follows:

- TPH-d concentrations in the second confirmation samples ranged from 110 to 460 milligrams per kilogram (mg/kg).
- TPH-mo concentrations in these two samples ranged from 170 to 1,300 mg/kg.
- Napthalene ranged from below the detection limit to 2.3 mg/kg.
- Detected VOC concentrations were xylenes which ranged from below the detection limit to 14 micrograms per kilogram (ug/kg).

4.2 QUALITY ASSURANCE/QUALITY CONTROL

The analytical laboratory data was reviewed by BVNA to establish its validity and to ensure the laboratory data was complete and accurate. A review of the data validation process indicates that the laboratories completed the QA/QC activities required for the samples such as lab control samples, matrix spikes, and duplicates. No significant QA/QC issues were identified, as noted in the laboratory reports presented in Appendices C and D. The QA/QC parameters for the samples were within acceptable limits and suggest that the data is useful for its intended purpose.

5.0 DISCUSSION AND RECOMMENDATIONS

By the late 1950s, the area of the subject property had been filled in with soil, industrial waste, and construction debris by the Paraffine Company, who operated an industrial complex along the Emeryville waterfront from around 1884 until the late 1960s. The subject property remained vacant and appeared to be used for dumping until around 1970, when it was developed with a gasoline station. The placement of

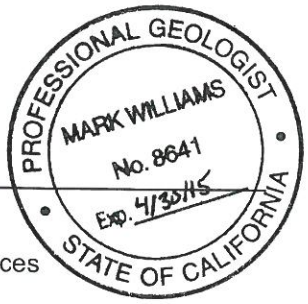
fill consisting of industrial waste and construction debris on the subject property in the late 1950s, and various fill materials identified as roofing material were visible in the excavated areas.

The soil and fill impacted by the diesel release were excavated and removed from the site. The extent of the excavation was significantly larger than what was proposed in the May 2014 workplan. Final confirmation samples contained remarkably less naphthalene, VOCs, and diesel range hydrocarbons than previously collected samples in the diesel impacted areas. Fill materials encountered during excavation of the diesel release area as well as the UST replacement included large quantities of brick and glass debris, asphalt shingles, tar paper, trash, building and roofing insulation, and wood debris. Residual concentrations of TPH-d and TPH-mo in the final confirmation samples appear to be largely attributable to the historical industrial waste debris present beneath the site and surrounding area.

No further action appears warranted with respect to the diesel line release.

6.0 SIGNATURES

This report prepared by:



Mark Williams, P.G..
Senior Project Geologist
Health, Safety and Environmental Services
San Francisco Regional Office

This report reviewed by:

John Werfal
Regional Director
Health, Safety and Environmental Services
San Francisco Regional Office

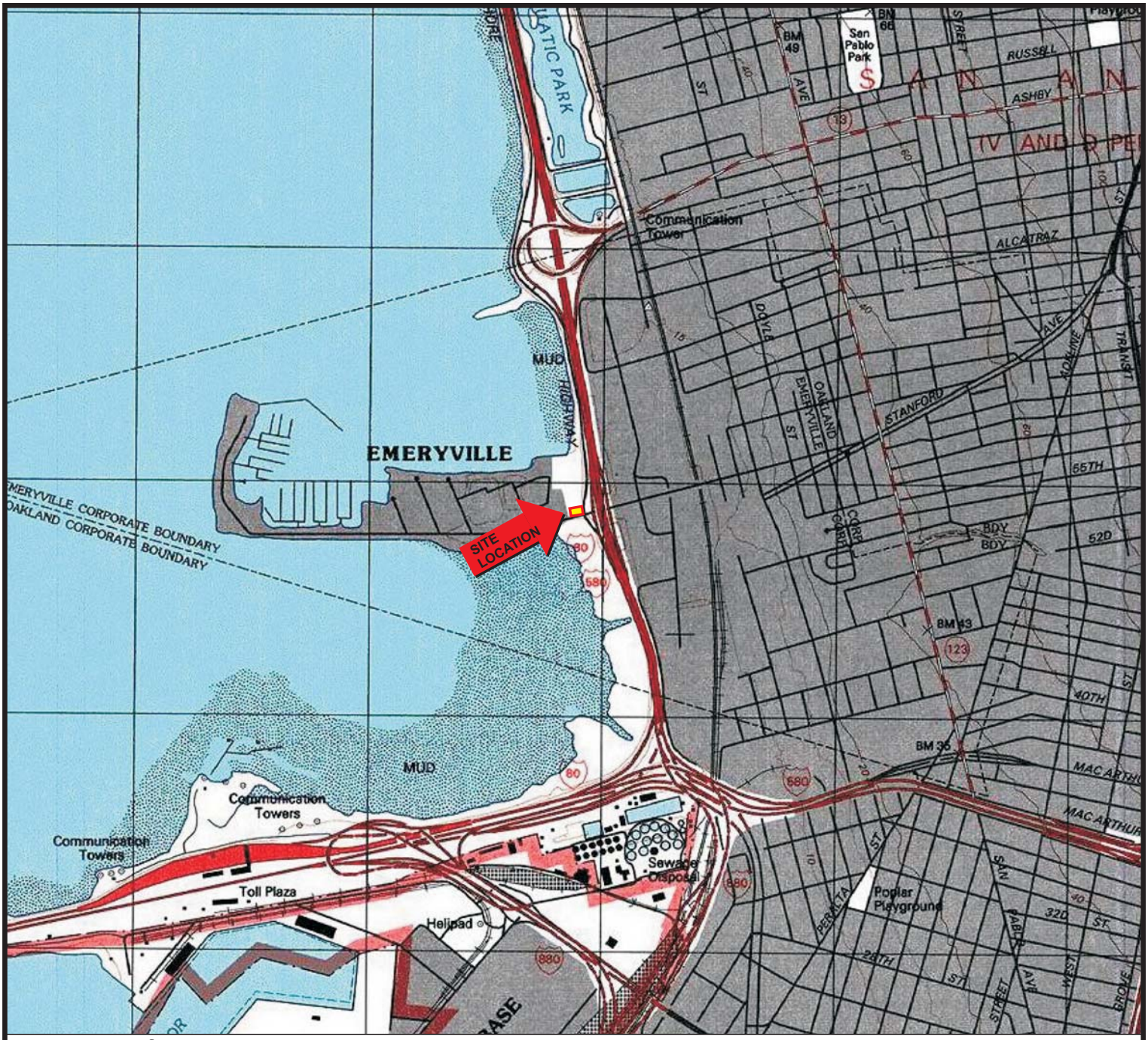
TABLE

TABLE 1
Diesel Line Excavation
Soil Analytical Results-TPH and VOCs
1800 1/2 Powell Street
Emeryville, California

	Sample Identification	DE-1-N	DE-1-S	DE-1-E	DE-2E	DE-1-W	DE-2-W	RWQCB ESL - Commercial
		excavated		excavated		excavated		
	Sample Date	6/23/2014	6/23/2014	6/23/2014	6/26/2014	6/23/2014	6/26/2014	
VOCs (µg/kg)	Benzene	**1,800**	<4.9	<5	<4.8	<460	<4.9	44
	Toluene	**7,200**	<4.9	<5	<4.8	**1,100**	<4.9	2,900
	Ethylbenzene	**16,000**	<4.9	<5	<4.8	**7,400**	<4.9	3,300
	Total Xylenes	**92,000**	**14**	**23**	<9.6	**48,000**	**10**	2,300
	Ethanol	<440	<980	<1,000	<960	<46,000	<970	--
	Methyl Tert-Butyl Ether (MTBE)	<440	<4.9	<5	<4.8	<460	<4.9	23
	Tert-Amyl Methyl Ether (TAME)	<440	<4.9	<5	<4.8	<460	<4.9	--
	Ethyl Tert-Butyl Ether (ETBE)	<440	<4.9	<5	<4.8	<460	<4.9	--
	Ethylene Dibromide (EDB)	<440	<4.9	<5	<4.8	<460	<4.9	--
	Ethylene Dichloride (EDC)	<440	<4.9	<5	<4.8	<460	<4.9	--
	Tert-Butyl Alcohol (TBA)	<870	<98	<100	<4.8	<930	<4.9	75
	Diisopropyl Ether (DIPE)	<440	<4.9	<5	<4.8	<460	<4.9	--
Naphthalene (mg/kg)		**12**	**2.3**	**0.26**	<0.13	**12**	<1.3	1.2
Diesel Range Organics (DRO) (mg/kg)		**740**	**110**	**1,200**	**150**	**800**	**460**	110
Motor Oill Range Organics (MRO) (mg/kg)		<250	**170**	**2,100**	**350**	**420**	**1,300**	500

Notes:
Volatile organic compounds (VOC) samples reported in micrograms per kilogram (µg/Kg)
Diesel Range Organics (DRO) samples reported in milligrams per kilogram (mg/Kg)
Motor Oil Range Organics (MRO) samples reported in milligrams per kilogram (mg/Kg)
<4,800 = not detected above analytical laboratory reporting limit (elevated reporting limits due to dillution)
RWQCB ESL = Regional Water Quality Control Board Environmental Screening Level for Commercial land use (RWQCB, Table A-1, December 2013).
DRO analyzed by EPA Method 8015B
VOCs analyzed by EPA Method 8260
SVOC Napthalene analyzed by EPA Method 8270
Bolded values denote concentrations detected above laboratory reporting limits and above ESL
-- = Not Established

FIGURES



Source: TOPO! © 2000 National Geographic Holdings

Note: Location Information is Approximate

1 0 1/2 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

Portion of the 7.5-Minute Series, Oakland West, California
Quadrangle Topographic Map (Datum: NAD 83)
United States Department of the Interior
Geological Survey
1997 Photorevised from 1993

N

CALIF

QUADRANGLE LOCATION

SITE LOCATION MAP	FIGURE
1800 ½ Powell Street Emeryville, California	1

BUREAU VERITAS

Holiday Inn
Hotel Building
1800 Powell

Parking Lot

FRONTAGE ROAD

Shell Station
1800 1/2 Powell

POWELL STREET

parking lot

planter

trash encl.

Car Wash

Air/ water

Marketeer Building

Service islands

canopy

USTs

MPD-1 MPD-2 MPD-3 MPD-4 MPD-5 MPD-6 MPD-7 MPD-8 MPD-9 MPD-10

D-5 D-6 D-7 D-9

SB-7 SB-8 SB-9 SB-10 SB-11 SB-12

S-1/A S-2/E S-3/B S-4/C S-5 S-6 S-7 S-8 S-9 S-10 S-11/D S-12 S-13 S-14

BV-1 BV-2 BV-3 BV-4

Approximate Groundwater Flow Direction

traffic island

0 30
SCALE: feet

Approximate Excavation Boundary

DE-1-N DE-1-E DE-1-S DE-1-W DE-2-E DE-2-W

CS-1 CS-2

Approximate Location of Diesel Product Line

Damaged Product Line

EXPLANATION

- MPD-1 — Soil sample location (9/23/04)
- D-9 — Soil sample location (3/19/98)
- B-1 — Soil boring location (5/20/96)
- SB-7 — Soil boring location (4/18-19/06)
- S-5 — Monitoring well location
- S-6 — Destroyed monitoring well location
- S-1/A — Tank backfill well location
- Soil Boring Location (Bureau Veritas, 9/30/13)
- Proposed Extent of Excavation, Scoped 1:1 to Groundwater
- Soil Sample Location (Bureau Veritas, 10/4/13)
- Electrical line (E)
- Storm drain line (SD)
- Water line (W)
- Gas line (G)
- Telecommunications line (T)
- Storm drain catch basin
- June 23, 2014 Sample - DE-1-S
- June 26, 2014 Sample - DE-2-S

REFERENCE: CAMBRIA, "SITE PLAN". DATED 6/2/2006.

PROPOSED AREA OF EXCAVATION	FIGURE
Shell-Branded Service Station 1800 ½ Powell Street Emeryville, California Project No. 33113-013181.00	2

BUREAU VERITAS

APPENDIX A

LABORATORY ANALYTICAL DATA SHEETS AND CHAIN OF CUSTODY RECORD

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: 720-58215-1
Client Project/Site: Au Energy - 1800 Powell

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

Attn: Mark Williams

Authorized for release by:
6/24/2014 3:09:50 PM

Micah Smith, Project Manager II
(925)484-1919
micah.smith@testamericainc.com

Table of Contents

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
*	ISTD response or retention time outside acceptable limits
X	Surrogate is outside control limits

GC/MS Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control 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)

Client: Bureau Veritas North America, Inc.
Project/Site: Au Energy - 1800 Powell

TestAmerica Job ID: 720-58215-1

Job ID: 720-58215-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-58215-1

Comments
No additional comments.

Receipt
The samples were received on 6/23/2014 10:35 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 9.7° C.

GC/MS VOA
Method(s) 8260B: Internal standard responses were outside of acceptance limits for the following sample: DE-1-S (720-58215-4). The sample shows evidence of matrix interference.

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

GC/MS Semi VOA
Method(s) 8270C: Surrogate recovery for the following sample(s) was outside control limits: DE-1-W (720-58215-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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(s) 8015B: The following sample(s) required a dilution due to the nature of the sample matrix: DE-1-E (720-58215-2), DE-1-N (720-58215-3), DE-1-W (720-58215-1). 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: Bureau Veritas North America, Inc.
Project/Site: Au Energy - 1800 Powell

TestAmerica Job ID: 720-58215-1

Client Sample ID: DE-1-W — Lab Sample ID: 720-58215-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	7400		460		ug/Kg	100		8260B	Total/NA
Toluene	1100		460		ug/Kg	100		8260B	Total/NA
Xylenes, Total	48000		930		ug/Kg	100		8260B	Total/NA
Naphthalene	12		0.27		mg/Kg	2		8270C	Total/NA
Diesel Range Organics [C10-C28]	800		4.9		mg/Kg	5		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	420		250		mg/Kg	5		8015B	Total/NA

Client Sample ID: DE-1-E — Lab Sample ID: 720-58215-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	23		10		ug/Kg	1		8260B/CA_LUFT MS	Total/NA
Naphthalene	0.26		0.26		mg/Kg	2		8270C	Total/NA
Diesel Range Organics [C10-C28]	1200		20		mg/Kg	20		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	2100		1000		mg/Kg	20		8015B	Total/NA

Client Sample ID: DE-1-N — Lab Sample ID: 720-58215-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1800		440		ug/Kg	100		8260B	Total/NA
Ethylbenzene	16000		4400		ug/Kg	1000		8260B	Total/NA
Toluene	7200		440		ug/Kg	100		8260B	Total/NA
Xylenes, Total	92000		8700		ug/Kg	1000		8260B	Total/NA
Naphthalene	12		0.26		mg/Kg	2		8270C	Total/NA
Diesel Range Organics [C10-C28]	740		4.9		mg/Kg	5		8015B	Total/NA

Client Sample ID: DE-1-S — Lab Sample ID: 720-58215-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	14		9.8		ug/Kg	1		8260B/CA_LUFT MS	Total/NA
Naphthalene	2.3		0.27		mg/Kg	2		8270C	Total/NA
Diesel Range Organics [C10-C28]	110		2.0		mg/Kg	2		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	170		99		mg/Kg	2		8015B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Bureau Veritas North America, Inc.
Project/Site: Au Energy - 1800 Powell

TestAmerica Job ID: 720-58215-1

Client Sample ID: DE-1-W
Date Collected: 06/23/14 09:00
Date Received: 06/23/14 10:35

Lab Sample ID: 720-58215-1
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		460		ug/Kg		06/24/14 09:00	06/24/14 11:51	100
Ethylbenzene	**7400**		460		ug/Kg		06/24/14 09:00	06/24/14 12:51	100
Ethanol	ND	*	46000		ug/Kg		06/24/14 09:00	06/24/14 11:51	100
MTBE	ND		460		ug/Kg		06/24/14 09:00	06/24/14 11:51	100
TAME	ND		460		ug/Kg		06/24/14 09:00	06/24/14 11:51	100
Ethyl tert-butyl ether	ND		460		ug/Kg		06/24/14 09:00	06/24/14 11:51	100
Toluene	**1100**		460		ug/Kg		06/24/14 09:00	06/24/14 11:51	100
EDB	ND		460		ug/Kg		06/24/14 09:00	06/24/14 11:51	100
Xylenes, Total	**48000**		930		ug/Kg		06/24/14 09:00	06/24/14 12:51	100
EDC	ND		460		ug/Kg		06/24/14 09:00	06/24/14 11:51	100
TBA	ND	*	930		ug/Kg		06/24/14 09:00	06/24/14 11:51	100
DIPE	ND		460		ug/Kg		06/24/14 09:00	06/24/14 11:51	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*109*		*66 - 148*	*06/24/14 09:00*	*06/24/14 11:51*	*100*
4-Bromofluorobenzene	*112*		*66 - 148*	*06/24/14 09:00*	*06/24/14 12:51*	*100*
1,2-Dichloroethane-d4 (Surr)	*103*		*62 - 137*	*06/24/14 09:00*	*06/24/14 11:51*	*100*
1,2-Dichloroethane-d4 (Surr)	*102*		*62 - 137*	*06/24/14 09:00*	*06/24/14 12:51*	*100*
Toluene-d8 (Surr)	*97*		*65 - 141*	*06/24/14 09:00*	*06/24/14 11:51*	*100*
Toluene-d8 (Surr)	*97*		*65 - 141*	*06/24/14 09:00*	*06/24/14 12:51*	*100*

Method: 8270C - Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**12**		0.27		mg/Kg		06/23/14 10:52	06/24/14 02:29	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*101*	*X*	*21 - 98*	*06/23/14 10:52*	*06/24/14 02:29*	*2*
2-Fluorobiphenyl	*78*		*30 - 112*	*06/23/14 10:52*	*06/24/14 02:29*	*2*
Terphenyl-d14	*89*		*32 - 117*	*06/23/14 10:52*	*06/24/14 02:29*	*2*
2-Fluorophenol	*96*		*28 - 98*	*06/23/14 10:52*	*06/24/14 02:29*	*2*
Phenol-d5	*81*		*23 - 101*	*06/23/14 10:52*	*06/24/14 02:29*	*2*
2,4,6-Tribromophenol	*95*		*37 - 114*	*06/23/14 10:52*	*06/24/14 02:29*	*2*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**800**		4.9		mg/Kg		06/23/14 16:34	06/23/14 18:58	5
Motor Oil Range Organics [C24-C36]	**420**		250		mg/Kg		06/23/14 16:34	06/23/14 18:58	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*0*	*X D*	*40 - 130*	*06/23/14 16:34*	*06/23/14 18:58*	*5*

Client: Bureau Veritas North America, Inc.
Project/Site: Au Energy - 1800 Powell

TestAmerica Job ID: 720-58215-1

Client Sample ID: DE-1-E
Date Collected: 06/23/14 09:05
Date Received: 06/23/14 10:35

Lab Sample ID: 720-58215-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		5.0		ug/Kg		06/23/14 18:43	06/23/14 21:14	1
Benzene	ND		5.0		ug/Kg		06/23/14 18:43	06/23/14 21:14	1
EDB	ND		5.0		ug/Kg		06/23/14 18:43	06/23/14 21:14	1
EDC	ND		5.0		ug/Kg		06/23/14 18:43	06/23/14 21:14	1
Ethylbenzene	ND		5.0		ug/Kg		06/23/14 18:43	06/23/14 21:14	1
Toluene	ND		5.0		ug/Kg		06/23/14 18:43	06/23/14 21:14	1
Xylenes, Total	**23**		10		ug/Kg		06/23/14 18:43	06/23/14 21:14	1
TBA	ND		100		ug/Kg		06/23/14 18:43	06/23/14 21:14	1
Ethanol	ND		1000		ug/Kg		06/23/14 18:43	06/23/14 21:14	1
DIPE	ND		5.0		ug/Kg		06/23/14 18:43	06/23/14 21:14	1
TAME	ND		5.0		ug/Kg		06/23/14 18:43	06/23/14 21:14	1
Ethyl-t-butyl ether (ETBE)	ND		5.0		ug/Kg		06/23/14 18:43	06/23/14 21:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*114*		*45 - 131*	*06/23/14 18:43*	*06/23/14 21:14*	*1*
1,2-Dichloroethane-d4 (Surr)	*119*		*60 - 140*	*06/23/14 18:43*	*06/23/14 21:14*	*1*
Toluene-d8 (Surr)	*77*		*58 - 140*	*06/23/14 18:43*	*06/23/14 21:14*	*1*

Method: 8270C - Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**0.26**		0.26		mg/Kg		06/23/14 10:52	06/24/14 02:53	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*80*		*21 - 98*	*06/23/14 10:52*	*06/24/14 02:53*	*2*
2-Fluorobiphenyl	*77*		*30 - 112*	*06/23/14 10:52*	*06/24/14 02:53*	*2*
Terphenyl-d14	*91*		*32 - 117*	*06/23/14 10:52*	*06/24/14 02:53*	*2*
2-Fluorophenol	*85*		*28 - 98*	*06/23/14 10:52*	*06/24/14 02:53*	*2*
Phenol-d5	*75*		*23 - 101*	*06/23/14 10:52*	*06/24/14 02:53*	*2*
2,4,6-Tribromophenol	*92*		*37 - 114*	*06/23/14 10:52*	*06/24/14 02:53*	*2*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**1200**		20		mg/Kg		06/23/14 16:34	06/23/14 19:22	20
Motor Oil Range Organics [C24-C36]	**2100**		1000		mg/Kg		06/23/14 16:34	06/23/14 19:22	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*0*	*X D*	*40 - 130*	*06/23/14 16:34*	*06/23/14 19:22*	*20*

Client: Bureau Veritas North America, Inc.
Project/Site: Au Energy - 1800 Powell

TestAmerica Job ID: 720-58215-1

Client Sample ID: DE-1-N
Date Collected: 06/23/14 09:10
Date Received: 06/23/14 10:35

Lab Sample ID: 720-58215-3
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1800**		440		ug/Kg		06/24/14 09:00	06/24/14 11:22	100
Ethylbenzene	**16000**		4400		ug/Kg		06/24/14 09:00	06/24/14 12:20	1000
Ethanol	ND	*	44000		ug/Kg		06/24/14 09:00	06/24/14 11:22	100
MTBE	ND		440		ug/Kg		06/24/14 09:00	06/24/14 11:22	100
TAME	ND		440		ug/Kg		06/24/14 09:00	06/24/14 11:22	100
Ethyl tert-butyl ether	ND		440		ug/Kg		06/24/14 09:00	06/24/14 11:22	100
Toluene	**7200**		440		ug/Kg		06/24/14 09:00	06/24/14 11:22	100
EDB	ND		440		ug/Kg		06/24/14 09:00	06/24/14 11:22	100
Xylenes, Total	**92000**		8700		ug/Kg		06/24/14 09:00	06/24/14 12:20	1000
EDC	ND		440		ug/Kg		06/24/14 09:00	06/24/14 11:22	100
TBA	ND	*	870		ug/Kg		06/24/14 09:00	06/24/14 11:22	100
DIPE	ND		440		ug/Kg		06/24/14 09:00	06/24/14 11:22	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*111*		*66 - 148*	*06/24/14 09:00*	*06/24/14 11:22*	*100*
4-Bromofluorobenzene	*103*		*66 - 148*	*06/24/14 09:00*	*06/24/14 12:20*	*1000*
1,2-Dichloroethane-d4 (Surr)	*101*		*62 - 137*	*06/24/14 09:00*	*06/24/14 11:22*	*100*
1,2-Dichloroethane-d4 (Surr)	*99*		*62 - 137*	*06/24/14 09:00*	*06/24/14 12:20*	*1000*
Toluene-d8 (Surr)	*97*		*65 - 141*	*06/24/14 09:00*	*06/24/14 11:22*	*100*
Toluene-d8 (Surr)	*97*		*65 - 141*	*06/24/14 09:00*	*06/24/14 12:20*	*1000*

Method: 8270C - Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**12**		0.26		mg/Kg		06/23/14 10:52	06/24/14 03:17	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*84*		*21 - 98*	*06/23/14 10:52*	*06/24/14 03:17*	*2*
2-Fluorobiphenyl	*76*		*30 - 112*	*06/23/14 10:52*	*06/24/14 03:17*	*2*
Terphenyl-d14	*88*		*32 - 117*	*06/23/14 10:52*	*06/24/14 03:17*	*2*
2-Fluorophenol	*95*		*28 - 98*	*06/23/14 10:52*	*06/24/14 03:17*	*2*
Phenol-d5	*77*		*23 - 101*	*06/23/14 10:52*	*06/24/14 03:17*	*2*
2,4,6-Tribromophenol	*86*		*37 - 114*	*06/23/14 10:52*	*06/24/14 03:17*	*2*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**740**		4.9		mg/Kg		06/23/14 16:34	06/23/14 18:33	5
Motor Oil Range Organics [C24-C36]	ND		250		mg/Kg		06/23/14 16:34	06/23/14 18:33	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*0*	*X D*	*40 - 130*	*06/23/14 16:34*	*06/23/14 18:33*	*5*

Client: Bureau Veritas North America, Inc.
Project/Site: Au Energy - 1800 Powell

TestAmerica Job ID: 720-58215-1

Client Sample ID: DE-1-S
Date Collected: 06/23/14 09:15
Date Received: 06/23/14 10:35

Lab Sample ID: 720-58215-4
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		4.9		ug/Kg		06/24/14 09:00	06/24/14 11:51	1
Benzene	ND		4.9		ug/Kg		06/24/14 09:00	06/24/14 11:51	1
EDB	ND		4.9		ug/Kg		06/24/14 09:00	06/24/14 11:51	1
EDC	ND		4.9		ug/Kg		06/24/14 09:00	06/24/14 11:51	1
Ethylbenzene	ND	*	4.9		ug/Kg		06/24/14 09:00	06/24/14 11:51	1
Toluene	ND	*	4.9		ug/Kg		06/24/14 09:00	06/24/14 11:51	1
Xylenes, Total	**14**		9.8		ug/Kg		06/24/14 09:00	06/24/14 11:51	1
TBA	ND		98		ug/Kg		06/24/14 09:00	06/24/14 11:51	1
Ethanol	ND		980		ug/Kg		06/24/14 09:00	06/24/14 11:51	1
DIPE	ND		4.9		ug/Kg		06/24/14 09:00	06/24/14 11:51	1
TAME	ND		4.9		ug/Kg		06/24/14 09:00	06/24/14 11:51	1
Ethyl-t-butyl ether (ETBE)	ND		4.9		ug/Kg		06/24/14 09:00	06/24/14 11:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*164*	*X *	*45 - 131*	*06/24/14 09:00*	*06/24/14 11:51*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*60 - 140*	*06/24/14 09:00*	*06/24/14 11:51*	*1*
Toluene-d8 (Surr)	*49*	*X*	*58 - 140*	*06/24/14 09:00*	*06/24/14 11:51*	*1*

Method: 8270C - Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**2.3**		0.27		mg/Kg		06/23/14 10:52	06/24/14 03:41	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*87*		*21 - 98*	*06/23/14 10:52*	*06/24/14 03:41*	*2*
2-Fluorobiphenyl	*88*		*30 - 112*	*06/23/14 10:52*	*06/24/14 03:41*	*2*
Terphenyl-d14	*95*		*32 - 117*	*06/23/14 10:52*	*06/24/14 03:41*	*2*
2-Fluorophenol	*89*		*28 - 98*	*06/23/14 10:52*	*06/24/14 03:41*	*2*
Phenol-d5	*81*		*23 - 101*	*06/23/14 10:52*	*06/24/14 03:41*	*2*
2,4,6-Tribromophenol	*92*		*37 - 114*	*06/23/14 10:52*	*06/24/14 03:41*	*2*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**110**		2.0		mg/Kg		06/23/14 16:34	06/23/14 18:09	2
Motor Oil Range Organics [C24-C36]	**170**		99		mg/Kg		06/23/14 16:34	06/23/14 18:09	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*77*		*40 - 130*	*06/23/14 16:34*	*06/23/14 18:09*	*2*

Client: Bureau Veritas North America, Inc.
Project/Site: Au Energy - 1800 Powell

TestAmerica Job ID: 720-58215-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 720-161742/4
Matrix: Solid
Analysis Batch: 161742

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		ug/Kg			06/24/14 09:00	100
Ethylbenzene	ND		500		ug/Kg			06/24/14 09:00	100
MTBE	ND		500		ug/Kg			06/24/14 09:00	100
Toluene	ND		500		ug/Kg			06/24/14 09:00	100
EDB	ND		500		ug/Kg			06/24/14 09:00	100
Xylenes, Total	ND		1000		ug/Kg			06/24/14 09:00	100
EDC	ND		500		ug/Kg			06/24/14 09:00	100
TBA	ND		1000		ug/Kg			06/24/14 09:00	100
Ethanol	ND		50000		ug/Kg			06/24/14 09:00	100
DIPE	ND		500		ug/Kg			06/24/14 09:00	100
TAME	ND		500		ug/Kg			06/24/14 09:00	100
Ethyl tert-butyl ether	ND		500		ug/Kg			06/24/14 09:00	100

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*104*		*66 - 148*		*06/24/14 09:00*	*100*
1,2-Dichloroethane-d4 (Surr)	*96*		*62 - 137*		*06/24/14 09:00*	*100*
Toluene-d8 (Surr)	*99*		*65 - 141*		*06/24/14 09:00*	*100*

Lab Sample ID: LCS 720-161742/5
Matrix: Solid
Analysis Batch: 161742

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	5000	4650		ug/Kg		93	76 - 122
Ethylbenzene	5000	4660		ug/Kg		93	76 - 137
MTBE	5000	4600		ug/Kg		92	71 - 146
m-Xylene & p-Xylene	5000	4900		ug/Kg		98	71 - 142
Toluene	5000	4630		ug/Kg		93	77 - 120
EDB	5000	4900		ug/Kg		98	70 - 138
EDC	5000	4580		ug/Kg		92	67 - 126
TBA	50000	58000		ug/Kg		116	70 - 130
Ethanol	250000	263000		ug/Kg		105	70 - 130
DIPE	5000	4230		ug/Kg		85	70 - 130
TAME	5000	5120		ug/Kg		102	70 - 130
Ethyl tert-butyl ether	5000	4570		ug/Kg		91	70 - 130
o-Xylene	5000	4930		ug/Kg		99	71 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*102*		*66 - 148*
1,2-Dichloroethane-d4 (Surr)	*92*		*62 - 137*
Toluene-d8 (Surr)	*98*		*65 - 141*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 720-161742/6
Matrix: Solid
Analysis Batch: 161742

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	4650		ug/Kg		93	76 - 122	0	20
Ethylbenzene	5000	4630		ug/Kg		93	76 - 137	1	20
MTBE	5000	4830		ug/Kg		97	71 - 146	5	20
m-Xylene & p-Xylene	5000	4870		ug/Kg		97	71 - 142	0	20
Toluene	5000	4620		ug/Kg		92	77 - 120	0	20
EDB	5000	5080		ug/Kg		102	70 - 138	4	20
EDC	5000	4730		ug/Kg		95	67 - 126	3	20
TBA	50000	45000	*	ug/Kg		90	70 - 130	25	20
Ethanol	250000	192000	*	ug/Kg		77	70 - 130	31	20
DIPE	5000	4440		ug/Kg		89	70 - 130	5	20
TAME	5000	5320		ug/Kg		106	70 - 130	4	20
Ethyl tert-butyl ether	5000	4800		ug/Kg		96	70 - 130	5	20
o-Xylene	5000	4960		ug/Kg		99	71 - 142	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*66 - 148*
1,2-Dichloroethane-d4 (Surr)	*95*		*62 - 137*
Toluene-d8 (Surr)	*99*		*65 - 141*

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

Lab Sample ID: MB 720-161700/5
Matrix: Solid
Analysis Batch: 161700

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		ug/Kg			06/23/14 18:16	1
Ethylbenzene	ND		5.0		ug/Kg			06/23/14 18:16	1
MTBE	ND		5.0		ug/Kg			06/23/14 18:16	1
Toluene	ND		5.0		ug/Kg			06/23/14 18:16	1
EDB	ND		5.0		ug/Kg			06/23/14 18:16	1
Xylenes, Total	ND		10		ug/Kg			06/23/14 18:16	1
EDC	ND		5.0		ug/Kg			06/23/14 18:16	1
TBA	ND		100		ug/Kg			06/23/14 18:16	1
Ethanol	ND		1000		ug/Kg			06/23/14 18:16	1
DIPE	ND		5.0		ug/Kg			06/23/14 18:16	1
TAME	ND		5.0		ug/Kg			06/23/14 18:16	1
Ethyl-t-butyl ether (ETBE)	ND		5.0		ug/Kg			06/23/14 18:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*45 - 131*		*06/23/14 18:16*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*60 - 140*		*06/23/14 18:16*	*1*
Toluene-d8 (Surr)	*95*		*58 - 140*		*06/23/14 18:16*	*1*

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

Lab Sample ID: LCS 720-161700/6
Matrix: Solid
Analysis Batch: 161700

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	45.9		ug/Kg		92	70 - 130
Ethylbenzene	50.0	44.4		ug/Kg		89	80 - 137
MTBE	50.0	49.8		ug/Kg		100	70 - 144
m-Xylene & p-Xylene	50.0	46.1		ug/Kg		92	70 - 146
Toluene	50.0	46.6		ug/Kg		93	80 - 128
EDB	50.0	50.7		ug/Kg		101	70 - 140
EDC	50.0	50.2		ug/Kg		100	70 - 130
TBA	500	455		ug/Kg		91	63 - 130
Ethanol	2500	2340		ug/Kg		94	49 - 162
DIPE	50.0	47.4		ug/Kg		95	70 - 131
TAME	50.0	52.5		ug/Kg		105	70 - 140
Ethyl-t-butyl ether (ETBE)	50.0	48.8		ug/Kg		98	70 - 130
o-Xylene	50.0	46.8		ug/Kg		94	70 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*97*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*98*		*60 - 140*
Toluene-d8 (Surr)	*96*		*58 - 140*

Lab Sample ID: LCSD 720-161700/7
Matrix: Solid
Analysis Batch: 161700

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	45.9		ug/Kg		92	70 - 130	0	20
Ethylbenzene	50.0	44.6		ug/Kg		89	80 - 137	0	20
MTBE	50.0	48.5		ug/Kg		97	70 - 144	3	20
m-Xylene & p-Xylene	50.0	46.1		ug/Kg		92	70 - 146	0	20
Toluene	50.0	46.6		ug/Kg		93	80 - 128	0	20
EDB	50.0	50.8		ug/Kg		102	70 - 140	0	20
EDC	50.0	49.4		ug/Kg		99	70 - 130	1	20
TBA	500	456		ug/Kg		91	63 - 130	0	20
Ethanol	2500	2350		ug/Kg		94	49 - 162	1	20
DIPE	50.0	46.4		ug/Kg		93	70 - 131	2	20
TAME	50.0	51.7		ug/Kg		103	70 - 140	2	20
Ethyl-t-butyl ether (ETBE)	50.0	47.9		ug/Kg		96	70 - 130	2	20
o-Xylene	50.0	46.6		ug/Kg		93	70 - 140	0	20

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

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

Lab Sample ID: MB 720-161740/4
Matrix: Solid
Analysis Batch: 161740

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		ug/Kg			06/24/14 08:57	1
Ethylbenzene	ND		5.0		ug/Kg			06/24/14 08:57	1
MTBE	ND		5.0		ug/Kg			06/24/14 08:57	1
Toluene	ND		5.0		ug/Kg			06/24/14 08:57	1
EDB	ND		5.0		ug/Kg			06/24/14 08:57	1
Xylenes, Total	ND		10		ug/Kg			06/24/14 08:57	1
EDC	ND		5.0		ug/Kg			06/24/14 08:57	1
TBA	ND		100		ug/Kg			06/24/14 08:57	1
Ethanol	ND		1000		ug/Kg			06/24/14 08:57	1
DIPE	ND		5.0		ug/Kg			06/24/14 08:57	1
TAME	ND		5.0		ug/Kg			06/24/14 08:57	1
Ethyl-t-butyl ether (ETBE)	ND		5.0		ug/Kg			06/24/14 08:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*45 - 131*		*06/24/14 08:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*60 - 140*		*06/24/14 08:57*	*1*
Toluene-d8 (Surr)	*95*		*58 - 140*		*06/24/14 08:57*	*1*

Lab Sample ID: LCS 720-161740/5
Matrix: Solid
Analysis Batch: 161740

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	43.5		ug/Kg		87	70 - 130
Ethylbenzene	50.0	41.6		ug/Kg		83	80 - 137
MTBE	50.0	48.7		ug/Kg		97	70 - 144
m-Xylene & p-Xylene	50.0	46.6		ug/Kg		93	70 - 146
Toluene	50.0	44.3		ug/Kg		89	80 - 128
EDB	50.0	51.5		ug/Kg		103	70 - 140
EDC	50.0	44.9		ug/Kg		90	70 - 130
TBA	500	423		ug/Kg		85	63 - 130
Ethanol	2500	1880		ug/Kg		75	49 - 162
DIPE	50.0	38.2		ug/Kg		76	70 - 131
TAME	50.0	53.1		ug/Kg		106	70 - 140
Ethyl-t-butyl ether (ETBE)	50.0	45.0		ug/Kg		90	70 - 130
o-Xylene	50.0	44.1		ug/Kg		88	70 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*97*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*96*		*60 - 140*
Toluene-d8 (Surr)	*96*		*58 - 140*

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

Lab Sample ID: LCSD 720-161740/6
Matrix: Solid
Analysis Batch: 161740

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	43.9		ug/Kg		88	70 - 130	1	20
Ethylbenzene	50.0	41.7		ug/Kg		83	80 - 137	0	20
MTBE	50.0	49.5		ug/Kg		99	70 - 144	2	20
m-Xylene & p-Xylene	50.0	46.7		ug/Kg		93	70 - 146	0	20
Toluene	50.0	44.6		ug/Kg		89	80 - 128	1	20
EDB	50.0	52.6		ug/Kg		105	70 - 140	2	20
EDC	50.0	45.2		ug/Kg		90	70 - 130	1	20
TBA	500	449		ug/Kg		90	63 - 130	6	20
Ethanol	2500	1850		ug/Kg		74	49 - 162	1	20
DIPE	50.0	38.7		ug/Kg		77	70 - 131	1	20
TAME	50.0	54.4		ug/Kg		109	70 - 140	3	20
Ethyl-t-butyl ether (ETBE)	50.0	45.8		ug/Kg		92	70 - 130	2	20
o-Xylene	50.0	44.7		ug/Kg		89	70 - 140	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*98*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*95*		*60 - 140*
Toluene-d8 (Surr)	*98*		*58 - 140*

Method: 8270C - Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Lab Sample ID: MB 720-161663/1-A
Matrix: Solid
Analysis Batch: 161709

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 161663

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.066		mg/Kg		06/23/14 09:20	06/24/14 00:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*86*		*21 - 98*	*06/23/14 09:20*	*06/24/14 00:54*	*1*
2-Fluorobiphenyl	*97*		*30 - 112*	*06/23/14 09:20*	*06/24/14 00:54*	*1*
Terphenyl-d14	*99*		*32 - 117*	*06/23/14 09:20*	*06/24/14 00:54*	*1*
2-Fluorophenol	*92*		*28 - 98*	*06/23/14 09:20*	*06/24/14 00:54*	*1*
Phenol-d5	*82*		*23 - 101*	*06/23/14 09:20*	*06/24/14 00:54*	*1*
2,4,6-Tribromophenol	*96*		*37 - 114*	*06/23/14 09:20*	*06/24/14 00:54*	*1*

Lab Sample ID: LCS 720-161663/2-A
Matrix: Solid
Analysis Batch: 161709

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 161663

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	1.33	1.01		mg/Kg		76	44 - 115

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5	*83*		*21 - 98*
2-Fluorobiphenyl	*97*		*30 - 112*
Terphenyl-d14	*99*		*32 - 117*

Method: 8270C - Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS) (Continued)

Lab Sample ID: LCS 720-161663/2-A
Matrix: Solid
Analysis Batch: 161709

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 161663

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorophenol	*88*		*28 - 98*
Phenol-d5	*86*		*23 - 101*
2,4,6-Tribromophenol	*103*		*37 - 114*

Lab Sample ID: LCSD 720-161663/3-A
Matrix: Solid
Analysis Batch: 161709

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 161663

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene			1.31	0.989		mg/Kg		75	44 - 115	2	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Nitrobenzene-d5	*82*		*21 - 98*
2-Fluorobiphenyl	*95*		*30 - 112*
Terphenyl-d14	*97*		*32 - 117*
2-Fluorophenol	*87*		*28 - 98*
Phenol-d5	*86*		*23 - 101*
2,4,6-Tribromophenol	*103*		*37 - 114*

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

Lab Sample ID: MB 720-161669/1-A
Matrix: Solid
Analysis Batch: 161650

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 161669

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		06/23/14 10:34	06/23/14 20:45	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		06/23/14 10:34	06/23/14 20:45	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
p-Terphenyl	*89*		*40 - 130*	*06/23/14 10:34*	*06/23/14 20:45*	*1*

Lab Sample ID: LCS 720-161669/2-A
Matrix: Solid
Analysis Batch: 161650

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 161669

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]			83.0	85.2		mg/Kg		103	50 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
p-Terphenyl	*115*		*40 - 130*

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

Lab Sample ID: LCSD 720-161669/3-A
Matrix: Solid
Analysis Batch: 161650

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 161669

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			82.8	84.9		mg/Kg		103	50 - 150	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*112*		*40 - 130*

GC/MS VOA

Analysis Batch: 161700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58215-2	DE-1-E	Total/NA	Solid	8260B/CA_LUFT MS	161725
LCS 720-161700/6	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-161700/7	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
MB 720-161700/5	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	

Prep Batch: 161725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58215-2	DE-1-E	Total/NA	Solid	5030B	

Analysis Batch: 161740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58215-4	DE-1-S	Total/NA	Solid	8260B/CA_LUFT MS	161761
LCS 720-161740/5	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-161740/6	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
MB 720-161740/4	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	

Analysis Batch: 161742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58215-1	DE-1-W	Total/NA	Solid	8260B	161764
720-58215-1	DE-1-W	Total/NA	Solid	8260B	161764
720-58215-3	DE-1-N	Total/NA	Solid	8260B	161764
720-58215-3	DE-1-N	Total/NA	Solid	8260B	161764
LCS 720-161742/5	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 720-161742/6	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 720-161742/4	Method Blank	Total/NA	Solid	8260B	

Prep Batch: 161761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58215-4	DE-1-S	Total/NA	Solid	5030B	

Prep Batch: 161764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58215-1	DE-1-W	Total/NA	Solid	5030B	
720-58215-3	DE-1-N	Total/NA	Solid	5030B	

GC/MS Semi VOA

Prep Batch: 161663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58215-1	DE-1-W	Total/NA	Solid	3546	
720-58215-2	DE-1-E	Total/NA	Solid	3546	
720-58215-3	DE-1-N	Total/NA	Solid	3546	
720-58215-4	DE-1-S	Total/NA	Solid	3546	
LCS 720-161663/2-A	Lab Control Sample	Total/NA	Solid	3546	

GC/MS Semi VOA (Continued)

Prep Batch: 161663 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 720-161663/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
MB 720-161663/1-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 161709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58215-1	DE-1-W	Total/NA	Solid	8270C	161663
720-58215-2	DE-1-E	Total/NA	Solid	8270C	161663
720-58215-3	DE-1-N	Total/NA	Solid	8270C	161663
720-58215-4	DE-1-S	Total/NA	Solid	8270C	161663
LCS 720-161663/2-A	Lab Control Sample	Total/NA	Solid	8270C	161663
LCSD 720-161663/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C	161663
MB 720-161663/1-A	Method Blank	Total/NA	Solid	8270C	161663

GC Semi VOA

Analysis Batch: 161650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58215-1	DE-1-W	Total/NA	Solid	8015B	161669
720-58215-2	DE-1-E	Total/NA	Solid	8015B	161669
720-58215-3	DE-1-N	Total/NA	Solid	8015B	161669
720-58215-4	DE-1-S	Total/NA	Solid	8015B	161669
LCS 720-161669/2-A	Lab Control Sample	Total/NA	Solid	8015B	161669
LCSD 720-161669/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B	161669
MB 720-161669/1-A	Method Blank	Total/NA	Solid	8015B	161669

Prep Batch: 161669

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58215-1	DE-1-W	Total/NA	Solid	3546	
720-58215-2	DE-1-E	Total/NA	Solid	3546	
720-58215-3	DE-1-N	Total/NA	Solid	3546	
720-58215-4	DE-1-S	Total/NA	Solid	3546	
LCS 720-161669/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 720-161669/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
MB 720-161669/1-A	Method Blank	Total/NA	Solid	3546	

Lab Chronicle

Client: Bureau Veritas North America, Inc.
Project/Site: Au Energy - 1800 Powell

TestAmerica Job ID: 720-58215-1

Client Sample ID: DE-1-W

Lab Sample ID: 720-58215-1

Date Collected: 06/23/14 09:00
Matrix: Solid
Date Received: 06/23/14 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			161764	06/24/14 09:00	PDR	TAL PLS
Total/NA	Analysis	8260B		100	161742	06/24/14 11:51	PDR	TAL PLS
Total/NA	Prep	5030B			161764	06/24/14 09:00	PDR	TAL PLS
Total/NA	Analysis	8260B		100	161742	06/24/14 12:51	PDR	TAL PLS
Total/NA	Prep	3546			161663	06/23/14 10:52	NDU	TAL PLS
Total/NA	Analysis	8270C		2	161709	06/24/14 02:29	MQL	TAL PLS
Total/NA	Prep	3546			161669	06/23/14 16:34	AFM	TAL PLS
Total/NA	Analysis	8015B		5	161650	06/23/14 18:58	JL	TAL PLS

Client Sample ID: DE-1-E

Lab Sample ID: 720-58215-2

Date Collected: 06/23/14 09:05
Matrix: Solid
Date Received: 06/23/14 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			161725	06/23/14 18:43	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	161700	06/23/14 21:14	ASC	TAL PLS
Total/NA	Prep	3546			161663	06/23/14 10:52	NDU	TAL PLS
Total/NA	Analysis	8270C		2	161709	06/24/14 02:53	MQL	TAL PLS
Total/NA	Prep	3546			161669	06/23/14 16:34	AFM	TAL PLS
Total/NA	Analysis	8015B		20	161650	06/23/14 19:22	JL	TAL PLS

Client Sample ID: DE-1-N

Lab Sample ID: 720-58215-3

Date Collected: 06/23/14 09:10
Matrix: Solid
Date Received: 06/23/14 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			161764	06/24/14 09:00	PDR	TAL PLS
Total/NA	Analysis	8260B		100	161742	06/24/14 11:22	PDR	TAL PLS
Total/NA	Prep	5030B			161764	06/24/14 09:00	PDR	TAL PLS
Total/NA	Analysis	8260B		1000	161742	06/24/14 12:20	PDR	TAL PLS
Total/NA	Prep	3546			161663	06/23/14 10:52	NDU	TAL PLS
Total/NA	Analysis	8270C		2	161709	06/24/14 03:17	MQL	TAL PLS
Total/NA	Prep	3546			161669	06/23/14 16:34	AFM	TAL PLS
Total/NA	Analysis	8015B		5	161650	06/23/14 18:33	JL	TAL PLS

Client Sample ID: DE-1-S

Lab Sample ID: 720-58215-4

Date Collected: 06/23/14 09:15
Matrix: Solid
Date Received: 06/23/14 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			161761	06/24/14 09:00	PDR	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	161740	06/24/14 11:51	PDR	TAL PLS
Total/NA	Prep	3546			161663	06/23/14 10:52	NDU	TAL PLS

Lab Chronicle

Client: Bureau Veritas North America, Inc.
Project/Site: Au Energy - 1800 Powell

TestAmerica Job ID: 720-58215-1

Client Sample ID: DE-1-S
Date Collected: 06/23/14 09:15
Date Received: 06/23/14 10:35

Lab Sample ID: 720-58215-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270C		2	161709	06/24/14 03:41	MQL	TAL PLS
Total/NA	Prep	3546			161669	06/23/14 16:34	AFM	TAL PLS
Total/NA	Analysis	8015B		2	161650	06/23/14 18:09	JL	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: Au Energy - 1800 Powell

TestAmerica Job ID: 720-58215-1

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

Method Summary

Client: Bureau Veritas North America, Inc.
Project/Site: Au Energy - 1800 Powell

TestAmerica Job ID: 720-58215-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PLS
8260B/CA_LUFTMS	8260B / CA LUFT MS	SW846	TAL PLS
8270C	Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/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: Bureau Veritas North America, Inc.
Project/Site: Au Energy - 1800 Powell

TestAmerica Job ID: 720-58215-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-58215-1	DE-1-W	Solid	06/23/14 09:00	06/23/14 10:35
720-58215-2	DE-1-E	Solid	06/23/14 09:05	06/23/14 10:35
720-58215-3	DE-1-N	Solid	06/23/14 09:10	06/23/14 10:35
720-58215-4	DE-1-S	Solid	06/23/14 09:15	06/23/14 10:35

720-58215

154540

CHAIN OF CUSTODY

Page 1 of 1

Lab: Test America

TAT: Rush - 1 day

Report results to:

Name	Mark Williams
Company	Bureau Veritas
Mailing Address	6920 Koll Center Parkway, Ste. 216
City, State, Zip	Pleasanton, California 94566
Telephone No.	(925) 426-2600
Fax No.	(925) 426-0106
Email:	Mark.williams@us.bureauveritas.com

all analysis

Project Information

Project No: AU Energy - 1800 Powell

Name:

Location: 1800 Powell, Emeryville, CA

Location:

EDD Format for Geotracker (YES) NO

Special instructions and/or specific regulatory requirements:

Sample Condition/Comments

By 3 pm if possible

Sample Identification	Date Sampled	Time Sampled	Matrix/ Media	No. of Conts	Analyses Requested: BTEX, EDB, EDC, MTBE, TAME, ETBE, DIPE, TBA, EtOH 8260	TPH-P	TPH-MD	Naphthalene 8270	Preservative
DE-1-W	6/23/14	9:00	Soil	1	X	X	X	X	ICE
DE-1-E		9:05			X	X	X	X	
DE-1-N		9:10			X	X	X	X	
DE-1-S		9:15			X	X	X	X	

RUSH

720-58215 Chain of Custody

Collected by:	Mark Williams		**Collector's Signature:**		
Relinquished by:	Mark Williams	**Date/Time** 6/23/14 10:33 pm	**Received by:**		**Date/Time** 6-23-14 1035
Relinquished by:		**Date/Time**	**Received by:**		**Date/Time**
Method of Shipment:	Drop off		**Sample Condition on Rcpt:**	9.7°	

Login Sample Receipt Checklist

Client: Bureau Veritas North America, Inc.

Job Number: 720-58215-1

Login Number: 58215

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Mullen, Joan

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: 720-58286-1
Client Project/Site: Au Energy - 1800 Powell

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

Attn: Mark Williams

Authorized for release by:
6/27/2014 4:25:59 PM

Micah Smith, Project Manager II
(925)484-1919
micah.smith@testamericainc.com

Table of Contents

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control 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
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

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)

Client: Bureau Veritas North America, Inc.
Project/Site: Au Energy - 1800 Powell

TestAmerica Job ID: 720-58286-1

Job ID: 720-58286-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-58286-1

Comments
No additional comments.

Receipt
The samples were received on 6/26/2014 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.1° C.

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

GC/MS Semi VOA
Method(s) 8270C: The following sample(s) was diluted due to the abundance of non-target analytes: DE-2-E (720-58286-2), DE-2-W (720-58286-1). Elevated reporting limits (RLs) are provided.

Method(s) 8270C: %R of surrogate (2,4,6-tribromophenol) outside of control limit.

Method(s) 8270C: Surrogate recovery for the following sample(s) was outside the upper control limit: DE-2-E (720-58286-2). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

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(s) 8015B: The following sample(s) required a dilution due to the nature of the sample matrix: (720-58286-1 MS), (720-58286-1 MSD). 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(s) 8015B: Due to the high concentration of C10-C28, the matrix spike / matrix spike duplicate (MS/MSD) for batch 161926 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method(s) 8015B: The following sample(s) required a dilution due to the nature of the sample matrix: DE-2-W (720-58286-1). 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: Bureau Veritas North America, Inc.
Project/Site: Au Energy - 1800 Powell

TestAmerica Job ID: 720-58286-1

Client Sample ID: DE-2-W — Lab Sample ID: 720-58286-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	9.8		9.7		ug/Kg	1		8260B/CA_LUFT MS	Total/NA
Diesel Range Organics [C10-C28]	460		20		mg/Kg	20		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	1300		1000		mg/Kg	20		8015B	Total/NA

Client Sample ID: DE-2-E — Lab Sample ID: 720-58286-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	150		2.0		mg/Kg	2		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	350		99		mg/Kg	2		8015B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Bureau Veritas North America, Inc.
Project/Site: Au Energy - 1800 Powell

TestAmerica Job ID: 720-58286-1

Client Sample ID: DE-2-W
Date Collected: 06/26/14 08:50
Date Received: 06/26/14 09:40

Lab Sample ID: 720-58286-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		4.9		ug/Kg		06/26/14 18:57	06/26/14 21:17	1
Benzene	ND		4.9		ug/Kg		06/26/14 18:57	06/26/14 21:17	1
EDB	ND		4.9		ug/Kg		06/26/14 18:57	06/26/14 21:17	1
EDC	ND		4.9		ug/Kg		06/26/14 18:57	06/26/14 21:17	1
Ethylbenzene	ND		4.9		ug/Kg		06/26/14 18:57	06/26/14 21:17	1
Toluene	ND		4.9		ug/Kg		06/26/14 18:57	06/26/14 21:17	1
Xylenes, Total	**9.8**		9.7		ug/Kg		06/26/14 18:57	06/26/14 21:17	1
TBA	ND		97		ug/Kg		06/26/14 18:57	06/26/14 21:17	1
Ethanol	ND		970		ug/Kg		06/26/14 18:57	06/26/14 21:17	1
DIPE	ND		4.9		ug/Kg		06/26/14 18:57	06/26/14 21:17	1
TAME	ND		4.9		ug/Kg		06/26/14 18:57	06/26/14 21:17	1
Ethyl-t-butyl ether (ETBE)	ND		4.9		ug/Kg		06/26/14 18:57	06/26/14 21:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*45 - 131*	*06/26/14 18:57*	*06/26/14 21:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*116*		*60 - 140*	*06/26/14 18:57*	*06/26/14 21:17*	*1*
Toluene-d8 (Surr)	*83*		*58 - 140*	*06/26/14 18:57*	*06/26/14 21:17*	*1*

Method: 8270C - Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.3		mg/Kg		06/26/14 13:03	06/27/14 13:12	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*89*		*21 - 98*	*06/26/14 13:03*	*06/27/14 13:12*	*10*
2-Fluorobiphenyl	*84*		*30 - 112*	*06/26/14 13:03*	*06/27/14 13:12*	*10*
Terphenyl-d14	*101*		*32 - 117*	*06/26/14 13:03*	*06/27/14 13:12*	*10*
2-Fluorophenol	*84*		*28 - 98*	*06/26/14 13:03*	*06/27/14 13:12*	*10*
Phenol-d5	*83*		*23 - 101*	*06/26/14 13:03*	*06/27/14 13:12*	*10*
2,4,6-Tribromophenol	*73*		*37 - 114*	*06/26/14 13:03*	*06/27/14 13:12*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**460**		20		mg/Kg		06/26/14 13:18	06/27/14 10:21	20
Motor Oil Range Organics [C24-C36]	**1300**		1000		mg/Kg		06/26/14 13:18	06/27/14 10:21	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*0*	*X D*	*40 - 130*	*06/26/14 13:18*	*06/27/14 10:21*	*20*

Client: Bureau Veritas North America, Inc.
Project/Site: Au Energy - 1800 Powell

TestAmerica Job ID: 720-58286-1

Client Sample ID: DE-2-E
Date Collected: 06/26/14 08:35
Date Received: 06/26/14 09:40

Lab Sample ID: 720-58286-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		4.8		ug/Kg		06/26/14 18:57	06/26/14 21:46	1
Benzene	ND		4.8		ug/Kg		06/26/14 18:57	06/26/14 21:46	1
EDB	ND		4.8		ug/Kg		06/26/14 18:57	06/26/14 21:46	1
EDC	ND		4.8		ug/Kg		06/26/14 18:57	06/26/14 21:46	1
Ethylbenzene	ND		4.8		ug/Kg		06/26/14 18:57	06/26/14 21:46	1
Toluene	ND		4.8		ug/Kg		06/26/14 18:57	06/26/14 21:46	1
Xylenes, Total	ND		9.6		ug/Kg		06/26/14 18:57	06/26/14 21:46	1
TBA	ND		96		ug/Kg		06/26/14 18:57	06/26/14 21:46	1
Ethanol	ND		960		ug/Kg		06/26/14 18:57	06/26/14 21:46	1
DIPE	ND		4.8		ug/Kg		06/26/14 18:57	06/26/14 21:46	1
TAME	ND		4.8		ug/Kg		06/26/14 18:57	06/26/14 21:46	1
Ethyl-t-butyl ether (ETBE)	ND		4.8		ug/Kg		06/26/14 18:57	06/26/14 21:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*45 - 131*	*06/26/14 18:57*	*06/26/14 21:46*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*60 - 140*	*06/26/14 18:57*	*06/26/14 21:46*	*1*
Toluene-d8 (Surr)	*88*		*58 - 140*	*06/26/14 18:57*	*06/26/14 21:46*	*1*

Method: 8270C - Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.13		mg/Kg		06/26/14 13:03	06/27/14 13:36	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*96*		*21 - 98*	*06/26/14 13:03*	*06/27/14 13:36*	*2*
2-Fluorobiphenyl	*98*		*30 - 112*	*06/26/14 13:03*	*06/27/14 13:36*	*2*
Terphenyl-d14	*104*		*32 - 117*	*06/26/14 13:03*	*06/27/14 13:36*	*2*
2-Fluorophenol	*104*	*X*	*28 - 98*	*06/26/14 13:03*	*06/27/14 13:36*	*2*
Phenol-d5	*88*		*23 - 101*	*06/26/14 13:03*	*06/27/14 13:36*	*2*
2,4,6-Tribromophenol	*119*	*X*	*37 - 114*	*06/26/14 13:03*	*06/27/14 13:36*	*2*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**150**		2.0		mg/Kg		06/26/14 13:18	06/27/14 11:09	2
Motor Oil Range Organics [C24-C36]	**350**		99		mg/Kg		06/26/14 13:18	06/27/14 11:09	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*101*		*40 - 130*	*06/26/14 13:18*	*06/27/14 11:09*	*2*

Client: Bureau Veritas North America, Inc.
Project/Site: Au Energy - 1800 Powell

TestAmerica Job ID: 720-58286-1

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

Lab Sample ID: MB 720-161938/4
Matrix: Solid
Analysis Batch: 161938

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		5.0		ug/Kg			06/26/14 18:52	1
Benzene	ND		5.0		ug/Kg			06/26/14 18:52	1
EDB	ND		5.0		ug/Kg			06/26/14 18:52	1
EDC	ND		5.0		ug/Kg			06/26/14 18:52	1
Ethylbenzene	ND		5.0		ug/Kg			06/26/14 18:52	1
Toluene	ND		5.0		ug/Kg			06/26/14 18:52	1
Xylenes, Total	ND		10		ug/Kg			06/26/14 18:52	1
TBA	ND		100		ug/Kg			06/26/14 18:52	1
Ethanol	ND		1000		ug/Kg			06/26/14 18:52	1
DIPE	ND		5.0		ug/Kg			06/26/14 18:52	1
TAME	ND		5.0		ug/Kg			06/26/14 18:52	1
Ethyl-t-butyl ether (ETBE)	ND		5.0		ug/Kg			06/26/14 18:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*45 - 131*		*06/26/14 18:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*116*		*60 - 140*		*06/26/14 18:52*	*1*
Toluene-d8 (Surr)	*94*		*58 - 140*		*06/26/14 18:52*	*1*

Lab Sample ID: LCS 720-161938/5
Matrix: Solid
Analysis Batch: 161938

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
MTBE	50.0	49.4		ug/Kg		99	70 - 144
Benzene	50.0	43.8		ug/Kg		88	70 - 130
EDB	50.0	53.5		ug/Kg		107	70 - 140
EDC	50.0	52.1		ug/Kg		104	70 - 130
Ethylbenzene	50.0	44.0		ug/Kg		88	80 - 137
Toluene	50.0	43.5		ug/Kg		87	80 - 128
m-Xylene & p-Xylene	50.0	48.3		ug/Kg		97	70 - 146
o-Xylene	50.0	47.1		ug/Kg		94	70 - 140
TBA	500	510		ug/Kg		102	63 - 130
Ethanol	2500	2120		ug/Kg		85	49 - 162
DIPE	50.0	41.7		ug/Kg		83	70 - 131
TAME	50.0	54.4		ug/Kg		109	70 - 140
Ethyl-t-butyl ether (ETBE)	50.0	48.5		ug/Kg		97	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*103*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*107*		*60 - 140*
Toluene-d8 (Surr)	*98*		*58 - 140*

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

Lab Sample ID: LCSD 720-161938/6
Matrix: Solid
Analysis Batch: 161938

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
MTBE			50.0	49.3		ug/Kg		99	70 - 144	0	20
Benzene			50.0	44.1		ug/Kg		88	70 - 130	1	20
EDB			50.0	51.6		ug/Kg		103	70 - 140	4	20
EDC			50.0	50.3		ug/Kg		101	70 - 130	4	20
Ethylbenzene			50.0	43.5		ug/Kg		87	80 - 137	1	20
Toluene			50.0	43.9		ug/Kg		88	80 - 128	1	20
m-Xylene & p-Xylene			50.0	47.8		ug/Kg		96	70 - 146	1	20
o-Xylene			50.0	46.3		ug/Kg		93	70 - 140	2	20
TBA			500	487		ug/Kg		97	63 - 130	5	20
Ethanol			2500	2140		ug/Kg		85	49 - 162	1	20
DIPE			50.0	41.3		ug/Kg		83	70 - 131	1	20
TAME			50.0	53.3		ug/Kg		107	70 - 140	2	20
Ethyl-t-butyl ether (ETBE)			50.0	47.5		ug/Kg		95	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*103*		*60 - 140*
Toluene-d8 (Surr)	*98*		*58 - 140*

Method: 8270C - Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Lab Sample ID: MB 720-161905/1-A
Matrix: Solid
Analysis Batch: 161915

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 161905

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.067		mg/Kg		06/26/14 07:57	06/26/14 15:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*87*		*21 - 98*	*06/26/14 07:57*	*06/26/14 15:35*	*1*
2-Fluorobiphenyl	*96*		*30 - 112*	*06/26/14 07:57*	*06/26/14 15:35*	*1*
Terphenyl-d14	*102*		*32 - 117*	*06/26/14 07:57*	*06/26/14 15:35*	*1*
2-Fluorophenol	*97*		*28 - 98*	*06/26/14 07:57*	*06/26/14 15:35*	*1*
Phenol-d5	*80*		*23 - 101*	*06/26/14 07:57*	*06/26/14 15:35*	*1*
2,4,6-Tribromophenol	*96*		*37 - 114*	*06/26/14 07:57*	*06/26/14 15:35*	*1*

Lab Sample ID: LCS 720-161905/2-A
Matrix: Solid
Analysis Batch: 161915

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 161905

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene			1.32	1.04		mg/Kg		79	44 - 115

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5	*91*		*21 - 98*
2-Fluorobiphenyl	*103*		*30 - 112*
Terphenyl-d14	*99*		*32 - 117*

Method: 8270C - Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS) (Continued)

Lab Sample ID: LCS 720-161905/2-A
Matrix: Solid
Analysis Batch: 161915

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 161905

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorophenol	97		28 - 98
Phenol-d5	89		23 - 101
2,4,6-Tribromophenol	118	X	37 - 114

Lab Sample ID: LCSD 720-161905/3-A
Matrix: Solid
Analysis Batch: 161915

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 161905

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene			1.32	1.04		mg/Kg		79	44 - 115	0	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Nitrobenzene-d5	90		21 - 98
2-Fluorobiphenyl	105		30 - 112
Terphenyl-d14	104		32 - 117
2-Fluorophenol	96		28 - 98
Phenol-d5	90		23 - 101
2,4,6-Tribromophenol	120	X	37 - 114

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

Lab Sample ID: MB 720-161926/1-A
Matrix: Solid
Analysis Batch: 161900

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 161926

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		06/26/14 13:18	06/27/14 04:45	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		06/26/14 13:18	06/27/14 04:45	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
p-Terphenyl	101		40 - 130	06/26/14 13:18	06/27/14 04:45	1

Lab Sample ID: LCS 720-161926/2-A
Matrix: Solid
Analysis Batch: 161900

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 161926

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]			82.4	74.6		mg/Kg		90	50 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
p-Terphenyl	98		40 - 130

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

Lab Sample ID: LCSD 720-161926/3-A
Matrix: Solid
Analysis Batch: 161900

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 161926

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			82.7	76.6		mg/Kg		93	50 - 150	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*99*		*40 - 130*

Lab Sample ID: 720-58286-1 MS
Matrix: Solid
Analysis Batch: 161899

Client Sample ID: DE-2-W
Prep Type: Total/NA
Prep Batch: 161926

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]	460		82.5	934	4	mg/Kg		574	50 - 150		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
p-Terphenyl	*0*	*X D*	*40 - 130*

Lab Sample ID: 720-58286-1 MSD
Matrix: Solid
Analysis Batch: 161899

Client Sample ID: DE-2-W
Prep Type: Total/NA
Prep Batch: 161926

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	460		82.6	722	4	mg/Kg		316	50 - 150	26	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
p-Terphenyl	*0*	*X D*	*40 - 130*

GC/MS VOA

Analysis Batch: 161938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58286-1	DE-2-W	Total/NA	Solid	8260B/CA_LUFT MS	161957
720-58286-2	DE-2-E	Total/NA	Solid	8260B/CA_LUFT MS	161957
LCS 720-161938/5	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-161938/6	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
MB 720-161938/4	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	

Prep Batch: 161957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58286-1	DE-2-W	Total/NA	Solid	5030B	
720-58286-2	DE-2-E	Total/NA	Solid	5030B	

GC/MS Semi VOA

Prep Batch: 161905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58286-1	DE-2-W	Total/NA	Solid	3546	
720-58286-2	DE-2-E	Total/NA	Solid	3546	
LCS 720-161905/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 720-161905/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
MB 720-161905/1-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 161915

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-161905/2-A	Lab Control Sample	Total/NA	Solid	8270C	161905
LCSD 720-161905/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C	161905
MB 720-161905/1-A	Method Blank	Total/NA	Solid	8270C	161905

Analysis Batch: 162000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58286-1	DE-2-W	Total/NA	Solid	8270C	161905
720-58286-2	DE-2-E	Total/NA	Solid	8270C	161905

GC Semi VOA

Analysis Batch: 161899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58286-1 MS	DE-2-W	Total/NA	Solid	8015B	161926
720-58286-1 MSD	DE-2-W	Total/NA	Solid	8015B	161926

Analysis Batch: 161900

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-161926/2-A	Lab Control Sample	Total/NA	Solid	8015B	161926
LCSD 720-161926/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B	161926
MB 720-161926/1-A	Method Blank	Total/NA	Solid	8015B	161926

GC Semi VOA (Continued)

Prep Batch: 161926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58286-1	DE-2-W	Total/NA	Solid	3546	
720-58286-1 MS	DE-2-W	Total/NA	Solid	3546	
720-58286-1 MSD	DE-2-W	Total/NA	Solid	3546	
720-58286-2	DE-2-E	Total/NA	Solid	3546	
LCS 720-161926/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 720-161926/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
MB 720-161926/1-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 161978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58286-1	DE-2-W	Total/NA	Solid	8015B	161926

Analysis Batch: 161979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58286-2	DE-2-E	Total/NA	Solid	8015B	161926

Lab Chronicle

Client: Bureau Veritas North America, Inc.
Project/Site: Au Energy - 1800 Powell

TestAmerica Job ID: 720-58286-1

Client Sample ID: DE-2-W

Lab Sample ID: 720-58286-1

Date Collected: 06/26/14 08:50

Matrix: Solid

Date Received: 06/26/14 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			161957	06/26/14 18:57	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	161938	06/26/14 21:17	PDR	TAL PLS
Total/NA	Prep	3546			161905	06/26/14 13:03	NVP	TAL PLS
Total/NA	Analysis	8270C		10	162000	06/27/14 13:12	MQL	TAL PLS
Total/NA	Prep	3546			161926	06/26/14 13:18	STL	TAL PLS
Total/NA	Analysis	8015B		20	161978	06/27/14 10:21	JL	TAL PLS

Client Sample ID: DE-2-E

Lab Sample ID: 720-58286-2

Date Collected: 06/26/14 08:35

Matrix: Solid

Date Received: 06/26/14 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			161957	06/26/14 18:57	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	161938	06/26/14 21:46	PDR	TAL PLS
Total/NA	Prep	3546			161905	06/26/14 13:03	NVP	TAL PLS
Total/NA	Analysis	8270C		2	162000	06/27/14 13:36	MQL	TAL PLS
Total/NA	Prep	3546			161926	06/26/14 13:18	STL	TAL PLS
Total/NA	Analysis	8015B		2	161979	06/27/14 11:09	JL	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: Au Energy - 1800 Powell

TestAmerica Job ID: 720-58286-1

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

Method Summary

Client: Bureau Veritas North America, Inc.
Project/Site: Au Energy - 1800 Powell

TestAmerica Job ID: 720-58286-1

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFTMS	8260B / CA LUFT MS	SW846	TAL PLS
8270C	Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/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: Bureau Veritas North America, Inc.
Project/Site: Au Energy - 1800 Powell

TestAmerica Job ID: 720-58286-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-58286-1	DE-2-W	Solid	06/26/14 08:50	06/26/14 09:40
720-58286-2	DE-2-E	Solid	06/26/14 08:35	06/26/14 09:40

154610

CHAIN OF CUSTODY

720-58286

Page 1 of 1

Lab: Test America

TAT: 24 hour

6/27/2014

Report results to:

Name: Mark Williams

Company: Bureau Veritas San Ramon, CA

Mailing Address: ~~6320~~ ~~Koll Center Parkway~~, ~~Ste. 216~~

City, State, Zip: ~~Pleasanton~~, ~~California 94566~~

Telephone No.: (925) 426-2600

Fax No.: (925) 426-0106

Email: Mark.Williams1@us.bureauveritas.com

Project Information

Project No: 13181.03

Name: 1800 Powell

Location: Emeryville, CA

Location:

EDD Format for Geotracker: YES NO

Special instructions and/or specific regulatory requirements:

Analyses Requested

Sample Identification	Date Sampled	Time Sampled	Matrix/ Media	No. of Conts.	BTEX, EDB, EDC	MTBE, TAME, ETBE, DIPE, TBA, ETOH by 8260	TPH-diesel	TPH-motor oil	Naphthalene 8270	Sample Condition/Comments	Preservative
DE-2-W	6/26/14	8:30	Soil	1	X		X	X	X		ice
DE-2-E	6/26/14	8:35	Soil	1	X		X	X	X		ice

720-58286 Chain of Custody

RUSH

4.12

Collected by: Mark Williams

Collector's Signature:

Relinquished by: Mark Williams Date/Time 6/26/14 9:40am Received by: Date/Time 6-26-14 940

Relinquished by: Date/Time Received by: Date/Time

Method of Shipment: Sample Condition on Rcpt:

Login Sample Receipt Checklist

Client: Bureau Veritas North America, Inc.

Job Number: 720-58286-1

Login Number: 58286

List Source: TestAmerica Pleasanton

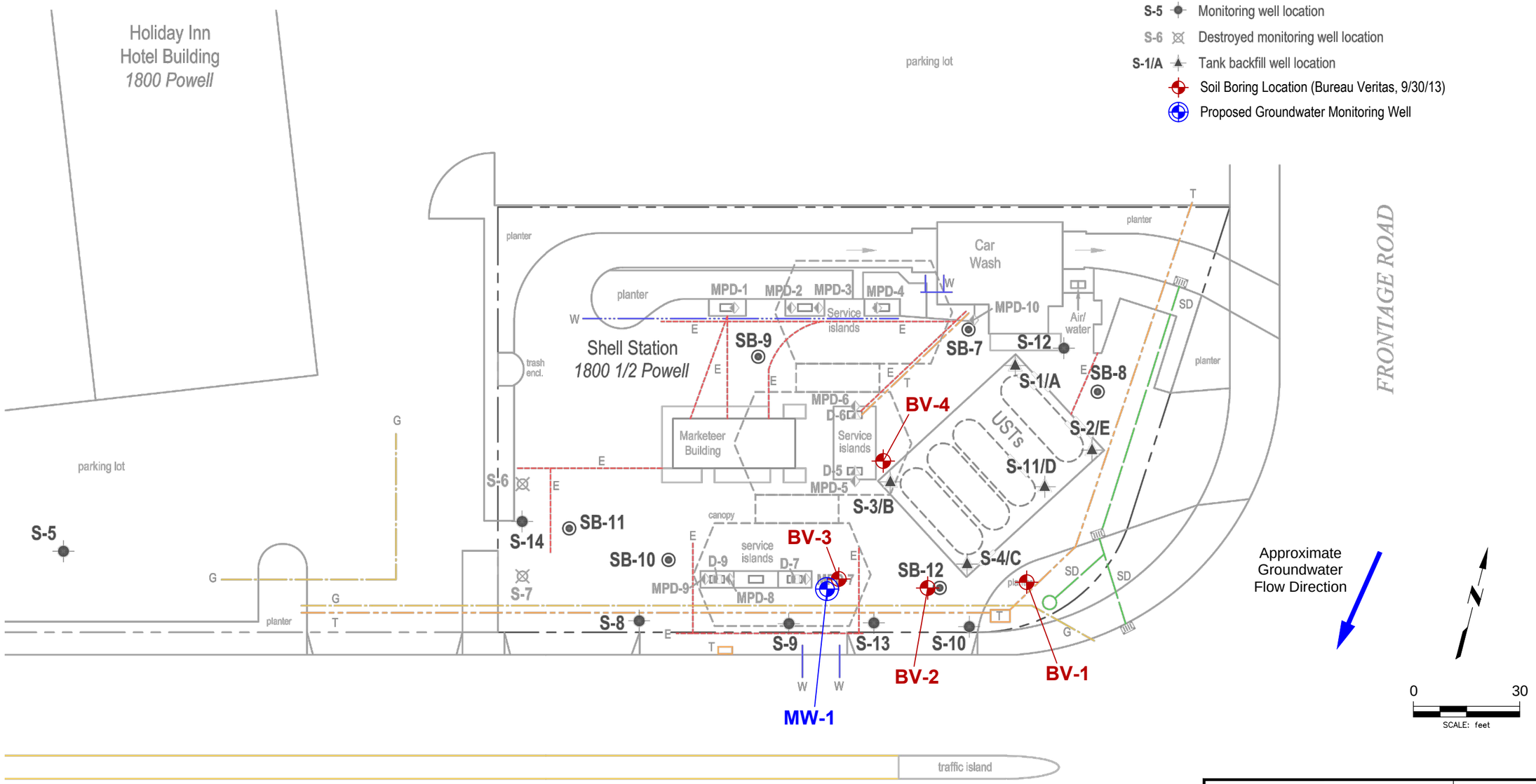
List Number: 1

Creator: Mullen, Joan

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	

EXPLANATION

- MPD-1 — Soil sample location (9/23/04)
- D-9 — Soil sample location (3/19/98)
- B-1 — Soil boring location (5/20/96)
- SB-7 — Soil boring location (4/18-19/06)
- S-5 — Monitoring well location
- S-6 — Destroyed monitoring well location
- S-1/A — Tank backfill well location
- Soil Boring Location (Bureau Veritas, 9/30/13)
- Proposed Groundwater Monitoring Well
- Electrical line (E)
- Storm drain line (SD)
- Water line (W)
- Gas line (G)
- Telecommunications line (T)
- Storm drain catch basin



REFERENCE: CAMBRIA, "SITE PLAN". DATED 6/2/2006.

SITE PLAN WITH PROPOSED MONITORING WELL LOCATION

SHELL-BRANDED SERVICE STATION
1800 1/2 POWELL STREET
EMERYVILLE, CALIFORNIA

Project No. 33113-013181.00

Figure **2**

10/23/13
SITE1013.DWG

BUREAU VERITAS