The Goodyear Tire & Rubber Company

200 Innovation Way
Akron, Ohio 44316-0001

330-796-7377
dennis_mcgavis@goodyear.com

July 16, 2014

Ms. Karel Detterman
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Parkway, Suite 250
Alameda, CA 94502-6577

Dear Ms. Detterman:

Attached for your review is our response letter to the ACEH Comments dated April 30, 2014 regarding the *Site Conceptual Model* for the Goodyear DEX #9578, 3430 Castro Valley Boulevard, Castro Valley, California. This response letter was prepared for the Goodyear Tire & Rubber Company by Stantec Consulting Services, Inc.

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

If you have any questions, please don't hesitate to contact me or Stantec Project Manager Gary Messerotes at 408-827-3533.

Very Truly Yours,

Dennis E. McGavis

Dennis E. McGavis
Director, Global EHS Sustainability
The Goodyear Tire & Rubber Company

Attachment

cc: Ms. Karen Burlingame (via electronic mail)

BROWNFIELD RESTORATION GROUP, LLC

Environmental Consultant On Behalf of:
The Goodyear Tire & Rubber Company

For Written Communications:

The Goodyear Tire & Rubber Company
200 Innovation Way, D/108i
Akron, Ohio 44316-0001

Phone: (330) 668-4600

July 16, 2014

Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda CA 94502
Attention: Karel Detterman, Hazardous Materials Specialist

Reference: ACEH Comments dated April 30, 2014
Former Goodyear DEX #9578
3430 Castro Valley Boulevard, Castro Valley, CA

Ms. Detterman:

The Goodyear Tire & Rubber Company (Goodyear) received the ACEH comments dated April 30, 2014 regarding the review of the case file, including the *Site Conceptual Model* for the above referenced Site. The ACEH comments (bold text) have been recreated below for reference. The italicized text following each comment, as well as the attached figures and tables, provides our response to each comment.

1. **Please use the SWRCB's Low Threat Underground Storage Tank Case Closure Policy (LTCP) as a reference to guide the case to closure.** *Noted and addressed as such in Table 4-1 of the SCM.*
2. **ACEH's biggest concern is tetrachloroethene (PCE), vinyl chloride (VC), and free product (non-aqueous phase liquids [NAPL]) in former well MW-3:**
    a. **What and where is the source of the PCE, VC, and free product.** *The PCE, VC, and petroleum hydrocarbons were observed and detected in MW-3 which was located immediately down-gradient from the former UST. The source of the impacts in MW-3 was the former UST.*
    b. **Definition of PCE needs to be accomplished.** *Additional soil and grab-groundwater samples are being proposed to further evaluate the area of the former UST for PCE, as presented in Table 5-1 of the SCM.*
    c. **Requested contours of free product shown on cross section & plan view & how free product is related to potential source areas.** *Since groundwater monitoring was initiated at the Site in 1994, light non-aqueous phase liquid (LNAPL) or "free product" was only detected intermittently in former monitoring well MW-3. LNAPL has not been observed in any of the other monitoring wells at the site. Per your request, isoconcentration contours for total petroleum hydrocarbon (TPH) have been added to the cross section and plan view maps. It appears that the soil concentrations exceeding 50 mg/Kg of TPH-DRO and 100 mg/Kg of TPH-GRO are limited to the area around the former UST as well as the HL-1 sample. The revised figures demonstrating these contours are included as Figures 3, 7 and 8.*

3. **Adequacy of monitoring well network:**
    a. **Boring log lithology points to possible confined conditions.** *It is agreed that possible confined conditions, or at least semi-confined conditions, are present as static groundwater levels rise above first encountered groundwater depths. However, as the shallow clay and silty clay interval (approximately 10-15' bgs) sometimes has been described as moist, it may not yield significant water until an adequate time passes allowing the well to recharge.*
    b. **MW-4 is not screened in same lithologic unit (SP/SC) at 15 feet below grade as MW-1, MW-2, & former MW-3 therefore MW-4 is not an adequate downgradient well to monitor for hydraulic lifts, which may be potentially associated PCE.** *It may be true that MW-4 is not screened in the same lithologic unit as MW-1, MW-2 and MW-3. However, MW-5 is screened in the same lithologic unit and is upgradient of MW-4. Both MW-4 and MW-5 were sampled in May 2014 for VOCs and SVOCs and the results for both samples indicated no analytes above the method detection limits. Monitoring wells MW-4 and MW-5 are downgradient from the former UST which is the source area for the release.*
    c. **Monitor and sample MW-5 using low-flow purging and sampling and analyze groundwater samples for VOCs EPA 8260 and SVOCs EPA 8270.** *As indicated above, sampling of MW-5 (and MW-4) was completed in May 2014 with all analytes resulting in ND concentrations. Table 4 has been modified to add this data and is attached along with the certified analytical reports. These items will also be uploaded to the ACEH's FTP site and Geotracker.*
    d. **If total depth of MW-5 matches construction depth, there shouldn't be a need to redevelop well although it hasn't been sampled since 8/2013.** *Monitoring well MW-5 did not require redevelopment and a valid groundwater sample was collected in May 2014. Field data sheets are included as an attachment.*
    e. **Please prepare and submit with the updated SCM a Rose diagram documenting direction variations in the groundwater gradient.** *A Rose-diagram has been prepared and is included as an attachment. The Rose-diagram confirms the groundwater flow direction to the south with the Vector Mean at approximately 171 degrees (180 degrees being due South).*
4. **An Oxygen-Releasing Compound (ORC) Amendment was placed in the excavations but there were no confirmation borings done to see if ORC & excavation was successful.** *The ORC was placed in the bottom of the excavation as a general polishing technique to help degrade the petroleum hydrocarbons over time and was not considered a remedial action alternative. However, three borings will be drilled to determine the effectiveness of the ORC based on a comparison of current TPH results vs previous TPH results in nearby soil samples. This is discussed further in Table 5-1 of the SCM.*
5. **Please revise Figure 8 by adding all eleven potential source areas listed in Section 1.1.2.** *Site features identified in the 2004 Phase I ESA and listed in Section 1.1.2 of the SCM have been added to Figure 2. The revised figure is attached.*
6. **Please submit the laboratory analytical report for the soil excavated during the August 2012 remedial action event which are referenced in Stantec's 10/19/2012 *Remediation Summary Report and First Semi-Annual Groundwater Monitoring Report*, page 5: "Soil proximate to the former UST was stored and characterized separately from the rest of the excavated soil, due to the presence of a *strong***

odor and visible sheen on the soil. **This investigation-derived waste was subsequently sampled by Stantec, and profiled as a non-hazardous waste".** *The laboratory reports are attached and will also be uploaded to the ACEH's FTP site and Geotracker.*

   a. **Additionally, please submit daily field observations from the August 2012 remedial action event to inform of the location of the *visible sheen on the soil.*** *The field data sheets are attached.*

7. **Last bullet of Section 1.1 regarding the oil/water separator and PCBs: please investigate for VOCs, SVOC including PAHs and naphthalene.** *The Phase I ESA and Limited Subsurface Investigation completed in 2004 evaluated various site features including the oil/water separator. The 2004 investigation was completed as a voluntary due diligence assessment for Goodyear's use. The scope of the assessment was not intended to comply with a regulatory program. Information from the 2004 due diligence investigation was provided as part of the SCM; however, Goodyear is not seeking agency closure for the entire Site. Based on the laboratory data from the 2004 investigation, the only areas that exceeded environmental screening levels (ESLs) were the former UST area and the area of HL-1. Additional investigation in these areas is discussed further in Table 5-1 of the SCM.*
8. **Groundwater contamination is probably not a dissolved phase in groundwater issue.** *Based on my telephone conversation on with you on June 12, it is my understanding that this comment is in regards to the possibility of the presence of secondary source as defined in the LTCP. The LTCP indicates that "petroleum release sites are required to undergo secondary source removal to the extent practicable". The secondary source in the area of the UST excavation was removed to the extent practicable in 2012. The excavation was limited by the presence of a high pressure natural gas line to the west, by a water line located along the Site building to the east, and by the presence of groundwater at approximately eight feet below ground surface. Per the LTCP, "additional removal or active remedial actions shall not be required by regulatory agencies unless (1) necessary to abate a demonstrated threat to human health or (2) the groundwater plume does not meet the definition of low threat as described in this policy." The current conditions at the Site support the conclusion that additional remedial actions are not required. This is further supported by the May 2014 groundwater sample results from the sampling of MW-4 and MW-5.*

Per your request, the tabular form of the SCM and the Data Gap Summary and Proposed Investigation form have been prepared and are attached. These forms as well as the revised figures and tables will be uploaded to the ACEH's FTP site and Geotracker. As indicated on Table 5-1, additional soil and grab-groundwater sampling is proposed in the area of the former UST and in the area of HL-1. The results of the proposed sampling will then be incorporated into the SCM in order to determine if additional data gaps are present.

Please do not hesitate to contact me if there are any questions. I can be reached at 330-668-4600 x 111 or at karen.burlingame@goodyear.com.

Respectfully,

Karen D. Burlingame
Project Manager for
The Goodyear Tire & Rubber Company

Attachments:
Table 1 Historical Soil Analytical Results (revised)
Table 4 Historical Groundwater Analytical Results (revised)
Table 4-1 Site Conceptual Model
Table 5-1 Data Gaps Summary and Proposed Investigation
Figure 2 Site Plan with Cross Section (revised)
Figure 3 Geologic Cross Section A-A' (revised)
Figure 7 Lateral Extent of Contaminants in Unsaturated Zone Soil (revised)
Figure 8 Lateral Extent of Contaminants in Smear and Saturated Zone Soil (revised)
Rose Diagram
2012 Waste Disposal Characterization Laboratory Reports
2012 Field Data Sheets

All information, conclusions, and recommendations provided by Stantec in this document regarding the Site have been prepared under the supervision of and reviewed by the Licensed Professional whose signature appears below:

Licensed Approver:

Name: Gary P. Messerotes, P.G.

Signature:

Date: July 16, 2014

Stamp:

PROFESSIONAL GEOLOGIST
GARY P. MESSEROTES
No. 5650
exp. 07/31/16
STATE OF CALIFORNIA

TABLES

TABLE 1
Historical Soil Analytical Results
Former Merritt Tire Sales / Goodyear DEX #9578
3430 Castro Valley Boulevard
Castro Valley, California

Confirmation Sample ID	Sample Depth (feet)	Sample Date	TPH-GRO	TPH-DRO	O & G	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	EDC	EDB	PCE	Carbon disulfide	Fluoranthene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	Cadmium	Chromium	Lead	Nickle	Zinc
SWRCB LTCP Closure Criteria for Soils 0-5 feet bgs			<100	<100	NE	8.2	NE	89	NE	NE	NE	NE	NE	NE	0.68	NE	45	0.68	0.68	NE	NE	NE	NE	NE
SWRCB LTCP Closure Criteria for Soils 5-10 feet bgs			<100	<100	NE	12	NE	134	NE	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE	NE	NE	NE
No. 1-South	8	09/21/93	**230**	**2,400**	**6,100**	**0.88**	**7.6**	**3.6**	**24**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5	**31**	Illegible	**32**	**140**
No. 2-North	8	09/21/93	**22**	**380**	**1,600**	**0.099**	**0.88**	**0.34**	**2.4**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5	**45**	**14**	**33**	**44**
MW 1-1-3	6	09/28/94	<1	<10	<50	<0.005	<0.005	<0.005	<0.005	NA	<0.005	NA	<0.005	NA	<0.3	<0.3	<0.3	NA	<0.3	**0.3**	**28**	**7**	**26**	**30**
MW 1-2-2	10	09/28/94	<1	<10	<50	<0.005	<0.005	<0.005	<0.005	NA	<0.005	NA	<0.005	NA	<0.3	<0.3	<0.3	NA	<0.3	NA	NA	NA	NA	NA
MW 2-1-1	6	09/28/94	<1	<10	<50	<0.005	<0.005	<0.005	<0.005	NA	<0.005	NA	<0.005	NA	<0.3	<0.3	<0.3	NA	<0.3	NA	NA	NA	NA	NA
MW 2-2-1	10	09/28/94	<1	<10	<50	<0.005	<0.005	<0.005	<0.005	NA	<0.005	NA	<0.005	NA	<0.3	<0.3	<0.3	NA	<0.3	NA	NA	NA	NA	NA
MW 3-1-1	6	09/28/94	**4**	**210**	**550**	**0.022**	**0.072**	**0.067**	**0.28**	NA	<0.005	NA	<0.005	NA	<0.3	<0.3	<0.3	NA	<0.3	NA	NA	NA	NA	NA
MW 3-2-2	10	09/28/94	**14**	**560**	**1,300**	**0.047**	**0.016**	**0.068**	**0.58**	NA	<0.005	NA	**0.031**	NA	<0.3	**0.7**	**0.6**	NA	<0.3	NA	NA	NA	NA	NA
PB-1	3-3.5	12/13/96	**120**	NA	**8200** [1]	**0.6**	**3.8**	**1.6**	**10**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PB-4	3-3.5	12/13/96	<1	NA	<10	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OWS-1	11.5	09/30/04	NA	<12.1	<12.0	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	NA	NA	**0.00731**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UST-1	7.5	09/30/04	NA	**1,050**	**2,490**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HL-1	8	09/30/04	NA	**818**	**899**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HL-2	12	09/30/04	NA	<10.1	**10.6**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HL-3	12	09/30/04	NA	<9.96	**10.9**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HL-4	5	09/30/04	NA	<10.2	**11.1**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SA-1	6.5	09/30/04	NA	<10.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-1	6.5	09/30/04	<6.10	<12.1	<12.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-1-5'	5	09/10/09	**1.4**	**780**	**1,900**	<0.0048	<0.0048	**0.027**	<0.0097	<0.0048	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-1-13'	13	09/10/09	**1.5**	**260**	**770**	<0.0048	<0.0048	<0.0048	<0.0096	<0.0048	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-1-17'	17	09/10/09	<0.047	**1.4**	<100	<0.0047	<0.0047	<0.0047	<0.0094	<0.0047	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-4-2'	2	09/10/09	<0.05	**9.5**	<100	<0.0050	<0.0050	<0.0050	<0.01	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-4-7'	7	09/10/09	<0.05	**900**	**2,600**	<0.0050	<0.0050	<0.0050	<0.01	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-4-13'	13	09/10/09	<0.049	<0.99	<100	<0.0049	<0.0049	<0.0049	<0.0098	<0.0049	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-4-17'	17	09/10/09	<0.05	<0.99	<100	<0.0050	<0.0050	<0.0050	<0.0099	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-5-7'	7	09/10/09	<0.05	**1.5**	<100	<0.0050	<0.0050	<0.0050	<0.01	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-5-14'	14	09/10/09	<0.049	**1.0**	<100	<0.0049	<0.0049	<0.0049	<0.0098	<0.0049	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-5-16'	16	09/10/09	<0.05	**1.2**	<100	<0.0050	<0.0050	<0.0050	<0.0099	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-8-6'	6	09/10/09	**1.4**	**780**	**2,200**	<0.0050	<0.0050	<0.0050	<0.0099	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-8-9'	9	09/10/09	**0.42**	**96**	**380**	<0.0050	<0.0050	<0.0050	<0.01	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-8-19'	19	09/10/09	<0.05	**1.8**	<100	<0.0050	<0.0050	<0.0050	<0.01	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EX-1	~5	08/13/12	<0.230	<0.99	<170	<0.0045	<0.0048	<0.0045	<0.0091	<0.0045	<0.0045	<0.0045	NA	NA	<0.066	<0.066	<0.066	<0.066	<0.066	NA	NA	**8.8**	NA	NA
EX-2	~5	08/13/12	<0.250	<1.0	<170	<0.0049	<0.0049	<0.0049	<0.0098	<0.0049	<0.0049	<0.0049	NA	NA	<0.066	<0.066	<0.066	<0.066	<0.066	NA	NA	**12**	NA	NA
EX-3	8	08/13/12	<0.230	<0.99	<170	<0.0047	<0.0047	<0.0047	<0.0094	<0.0047	<0.0047	<0.0047	NA	NA	<0.067	<0.067	<0.067	<0.067	<0.067	NA	NA	**10**	NA	NA
EX-4	~5	08/13/12	<0.240	<1.0	<170	<0.0047	<0.0047	<0.0047	<0.0095	<0.0047	<0.0047	<0.0047	NA	NA	<0.067	<0.067	<0.067	<0.067	<0.067	NA	NA	**7.6**	NA	NA
EX-5	~5	08/14/12	**7.1**	**980**	**370**	**0.014**	**0.022**	**0.046**	**0.3**	<0.0047	<0.0047	<0.0047	NA	NA	<3.3	<3.3	<3.3	<3.3	<3.3	NA	NA	**16**	NA	NA
EX-6	7.75	08/14/12	**5.4**	**750**	**510**	**0.051**	**0.092**	**0.19**	**0.71**	<0.0047	<0.0047	<0.0047	NA	NA	<1.3	<1.3	<1.3	<1.3	<1.3	NA	NA	**13**	NA	NA
EX-7	~5	08/14/12	**4.9**	**1,200**	**600**	**0.048**	**0.0063**	**0.16**	**0.037**	<0.0049	<0.0049	<0.0049	NA	NA	<0.67	**1.7**	**1.1**	<0.67	<0.67	NA	NA	**11**	NA	NA
MW-5@6.5-7	6.5-7	08/15/12		<0.99	<20 *	<0.0048	<0.0048	<0.0048		<0.0048	<0.0048	<0.0048	NA	NA	<0.066	<0.066	<0.066	<0.066	<0.066	NA	NA	**8.0**	NA	NA
EX-8	~5	08/16/12	**31**	**2,000**	<170	**0.12**	**0.11**	**0.27**	**3.9**	**0.0057**	<0.0048	<0.0048	NA	NA	<0.33	**2.4**	**1.6**	**0.37**	**0.38**	NA	NA	**26**	NA	NA
EX-9	7.75	08/16/12	**6.3**	**930**	**420**	**0.03**	**0.053**	**0.14**	**0.075**	<0.0047	<0.0047	<0.0047	NA	NA	<0.33	**0.89**	**0.71**	<0.33	<0.33	NA	NA	**15**	NA	NA
EX-10	5-6	08/16/12	**25**	**2,300**	**630**	**0.085**	**0.41**	**0.32**	**3.3**	<0.0049	<0.0049	<0.0049	NA	NA	**0.35**	**3.5**	**2.3**	**0.47**	**0.56**	NA	NA	**0.31**	NA	NA
EX-11	5-6	08/17/12	**2.4**	**670**	**240**	<0.0050	<0.0050	<0.0050	<0.0099	<0.0050	<0.0050	<0.0050	NA	NA	<0.33	<0.33	<0.33	<0.33	<0.33	NA	NA	**17**	NA	NA
EX-12	7.75	08/17/12	**1.0**	**740**	<170	<0.0049	<0.0049	**0.019**	<0.0099	<0.0049	<0.0049	<0.0049	NA	NA	<0.33	<0.33	<0.33	<0.33	<0.33	NA	NA	**9.3**	NA	NA
EX-13	5-6	08/17/12	<0.25	**6.8**	<170	<0.0049	<0.0049	<0.0049	<0.0099	<0.0049	<0.0049	<0.0049	NA	NA	<0.33	<0.33	<0.33	<0.33	<0.33	NA	NA	**12**	NA	NA
EX-14	6	08/17/12	<0.25	**83**	<170	<0.0050	<0.0050	<0.0050	<0.0099	<0.0050	<0.0050	<0.0050	NA	NA	<0.067	<0.067	<0.067	<0.067	<0.067	NA	NA	**13**	NA	NA
EX-15	7.75	08/17/12	**2.0**	**530**	<170	<0.0048	<0.0048	**0.024**	**0.014**	<0.0048	<0.0048	<0.0048	NA	NA	<0.33	<0.33	<0.33	<0.33	<0.33	NA	NA	**11**	NA	NA
EX-16	6	08/17/12	**0.57**	**5.5**	<170	<0.0050	<0.0050	<0.0050	**0.055**	<0.0050	<0.0050	<0.0050	NA	NA	<0.066	<0.066	<0.066	<0.066	<0.066	NA	NA	**9.1**	NA	NA
EX-17	6	08/18/12	<0.24	**40**	<170	<0.0048	<0.0048	<0.0048	<0.0096	<0.0048	<0.0048	<0.0048	NA	NA	<0.066	<0.066	<0.066	<0.066	<0.066	NA	NA	**9.5**	NA	NA
EX-18	7.75	08/18/12	**1.0**	**250**	<170	<0.0050	<0.0050	<0.0050	<0.0099	<0.0050	<0.0050	<0.0050	NA	NA	<0.33	<0.33	<0.33	<0.33	<0.33	NA	NA	**9.6**	NA	NA
EX-19	6	08/18/12	<0.25	<1.0	<170	<0.0049	<0.0049	<0.0049	<0.0099	<0.0049	<0.0049	<0.0049	NA	NA	<0.067	<0.067	<0.067	<0.067	<0.067	NA	NA	**8.5**	NA	NA
EX-20	6.5	08/20/12	**11**	**2,600**	**2,600**	**0.013**	**0.013**	**0.069**	**0.048**	<0.0047	<0.0047	<0.0047	NA	NA	<0.067	<0.067	<0.067	<0.067	<0.067	NA	NA	**7.5**[B]	NA	NA

TABLE 1
Historical Soil Analytical Results
Former Merritt Tire Sales / Goodyear DEX #9578
3430 Castro Valley Boulevard
Castro Valley, California

Notes:

All soil concentrations measured in milligrams per kilogram (mg/kg)

TPH-GRO = Total petroleum hydrocarbons as gasoline range organics; historically analyzed by EPA Method 8015B; beginning December 3, 2007 TPHg analyzed by LUFT GC/MS 8260B

TPH-DRO = Total petroleum hydrocarbons as diesel range organics; analyzed by EPA Method 8015B/3510; beginning August 21, 2012 analyzed by 8015B with silica gel cleanup

HEM = Hexane extractable materials

O & G = Oil and Grease - [1] Reported as Total Recoverable Petroleum Hydrocarbons (TRPH) by EPA Method 418.1 and also reported as HEM with silica gel cleanup (SGT-HEM) analyzed by EPA 1664A.

BTEX = Benzene, Toulene, Ethyl-benzene, and Total Xylenes; historically analyzed by EPA Method 8021B; beginning September 30, 2003 VOCs analyzed by EPA Method 8260B

MTBE = Methyl tert-butyl ether; historically analyzed by EPA Method 8021B; beginning September 30, 2003 volatile organic compounds analyzed by EPA Method 8260B

EDC and EDB = 1,2-Dicholorethane and Ethylene Dibromide respectively, analyzed by EPA Method 8260B

PCE = Tetrachloroethene

SWRCB LTCP Closure Criteria = State Water Resources Control Board's (SWRCB) Low-Threat Underground Storage Tank Case Closure Policy (LTCP), Media-Specific Closure Criteria for sites with commercial/industrial use.

NE = No established SWRCB LTCP Closure Criteria

NA = Not analyzed

< = concentration is below laboratory reporting limit (RL) (see analytical reports for details)

Bold numbers denote concentration levels at or above laboratory reporting limits.

* = LCS or LCSD exceeds the control limits

Denote concentration at or above SWRCB LTCP Closure Criteria

TABLE 4
Historical Groundwater Analytical Results
Former Merritt Tire Sales/Goodyear DEX #9578
3430 Castro Valley Boulevard
Castro Valley, California

Groundwater Monitoring Well ID	Sample Date	TPH-GRO	TPH-DRO	O & G / HEM	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	EDC	EDB	DEHP	Vinyl Chloride	1,1 -DCE	1,1 -DCA	cis 1,2-DCE	Chloroform	1,1,1 -TCE	TCE	PCE	Napthalene	n-Butylbenzene	Chloroethane	Isopropylbenzene	n-Propylbenzene	1,2,4-TMBZ	Chromium	Lead	Nickel	Zinc
SWRCB LTCP Closure Criteria		NE	NE	NE	1,000	NE	NE	NE	1,000	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
MW-1	09/30/94	<50	<50	<5,000	<0.5	<0.5	<0.5	<0.5	NA	<0.5	NA	**10**	<0.5	<0.5	<0.5	<0.5	**1.0**	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	<10	<50	<20	**30**
	04/24/95	<50	<50	<5,000	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**52** [1]	**5.6**	**60** [1]	**130** [1]
	08/28/02	<50.0 [1]	<50	**207**	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**92.0** [1]	**20.0** [1]	**98.0** [1]	**135** [1]
	09/30/03	<50.0	<50	<5,000	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA
	09/30/04	<100	**87**	<5,000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.00	NA	NA	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.0	NA	<5.0	NA	NA
	03/29/05	<100	<100	<5,210	<1.0	<1.0	<1.0	<1.0	<1.0	<1.00	NA	NA	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.0	NA	<5.0	NA	NA
	05/30/06	<50	<50	<2,500	<0.50*	<0.50*	<0.50*	<0.50*	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<1.0	<0.50	<0.50	<0.50	NA	<100	NA	NA
	06/15/06	NA	NA	NA	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<1.0	<0.50	<0.50	<0.50	NA	NA	NA	NA
	12/14/06	<50	<70	<2,600	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<1.0	<0.50	<0.50	<0.50	NA	<100	NA	NA
	06/27/07	<50	<490	<4,700	<2.0	<2.0	<2.0	<4.0	<5.0	NA	<2.0	NA	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	NA	**25**	NA	NA
	12/03/07	<100	<50	<5,000	<0.28	<0.36	<0.25	<0.60	<0.32	NA	<0.40	NA	<0.30	<0.42	<0.27	<0.32	<0.33	<0.30	<0.26	<0.32	<0.41	<0.37	<0.40	<0.25	<0.27	<0.23	NA	**6.2**	NA	NA
	06/30/08	<50.0	<49.0	<5,260	<0.500	<0.500	<0.500	<0.500	<0.500	NA	<0.500	NA	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<5.00	<0.500	<0.500 L	<1.00	<0.500	<0.500	NA	<5.00	NA	NA
	12/04/08	<50	<50	<2,500	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<11	NA	NA	NA	NA	NA	NA	NA	NA	<2.1	NA	NA	NA	NA	NA	NA	<5.0	NA	NA
	06/05/09	<50	<50	<5,000	**0.52**	<0.50	<0.50	<1.0	<5.0	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<2.1	NA	NA	NA	NA	NA	NA	<6.0	NA	NA
	08/21/12	<21	<24	<1,400	<0.25	<0.17	<0.070	<0.49	<0.069	<0.077	<0.075	<1.5	NA	NA	NA	NA	NA	NA	NA	NA	<0.24	NA	NA	NA	NA	NA	NA	<2.3	NA	NA
	01/29/13	<21	<24	<1,400	<0.25	<0.17	<0.13	<0.49	<0.069	<0.077	<0.075	<1.5	NA	NA	NA	NA	NA	NA	NA	NA	<0.24	NA	NA	NA	NA	NA	NA	**4.7** [J]	NA	NA
	05/01/13	<50	<51	<1,500	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<10	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	NA	NA	NA	NA	NA	NA	<5.0	NA	NA
	08/21/13	<21	<24	**910** [J]	<0.25	<0.17	<0.13	<0.49	<0.069	<0.077	<0.075	<1.5	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	NA	NA	NA	NA	NA	NA	<2.3	NA	NA
	05/21/14	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	09/30/94	<50	<50	<5,000	<0.5	<0.5	<0.5	<0.5	NA	<0.5	NA	<10	<0.5	<0.5	<0.5	<0.5	**1.7**	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	<10	<50	<20	<20
	04/24/95	<50	<50	<5,000	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**54** [1]	**7.5**	**67** [1]	**120** [1]
	08/28/02	<50	<50	**162**	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**43.0** [1]	**10.0** [1]	**52.0** [1]	**59.0** [1]
	09/30/03	<50.0	<50	<5,000	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA
	09/30/04	<100	**78**	<5,000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.00	NA	NA	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.0	NA	<5.0	NA	NA
	03/29/05	<100	<100	<5,490	<1.0	<1.0	<1.0	<1.0	<1.0	<1.00	NA	NA	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.0	NA	<5.0	NA	NA
	05/30/06	<50	<50	<2,400	<0.50*	<0.50*	<0.50*	<0.50*	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<1.0	<0.50	<0.50	<0.50	NA	<100	NA	NA
	06/15/06	NA	NA	NA	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<1.0	<0.50	<0.50	<0.50	NA	NA	NA	NA
	12/14/06	<50	<70	<2,700	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<1.0	<0.50	<0.50	<0.50	NA	<100	NA	NA
	06/27/07	<50	<480	<4,700	<2.0	<2.0	<2.0	<4.0	<5.0	NA	<2.0	NA	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	NA	**17**	NA	NA
	12/03/07	<100	<50	<5,000	<0.28	<0.36	<0.25	<0.60	<0.32	NA	<0.40	NA	<0.30	<0.42	<0.27	<0.32	<0.33	<0.30	<0.26	<0.32	<0.41	<0.37	<0.40	<0.25	<0.27	<0.23	NA	<5.0	NA	NA
	06/30/08	<50.0	<47.6	<5,210	<0.500	<0.500	<0.500	<0.500	<0.500	NA	<0.500	NA	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<5.00	<0.500	<0.500 L	<1.00	<0.500	<0.500	NA	<5.00	NA	NA
	12/04/08	<50	<50	<2,500	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<10	NA	NA	NA	NA	NA	NA	NA	NA	<2.1	NA	NA	NA	NA	NA	NA	<5.0	NA	NA
	06/05/09	<50	<50	<5,000	<0.50	<0.50	<0.50	<1.0	<5.0	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<2.1	NA	NA	NA	NA	NA	NA	<6.0	NA	NA
	08/21/12	<21	<24	<1,400	<0.25	<0.17	<0.49	<0.49	<0.069	<0.077	<0.075	<1.5	NA	NA	NA	NA	NA	NA	NA	NA	<0.24	NA	NA	NA	NA	NA	NA	<2.3	NA	NA
	01/29/13	<21	<24	<1,400	<0.25	<0.17	<0.49	<0.49	<0.069	<0.077	<0.075	<1.5	NA	NA	NA	NA	NA	NA	NA	NA	<0.25	NA	NA	NA	NA	NA	NA	**4.1** [J]	NA	NA
	05/01/13	<50	<51	<1,400	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<11	NA	NA	NA	NA	NA	NA	NA	NA	<2.1	NA	NA	NA	NA	NA	NA	<5.0	NA	NA
	08/21/13	<21	<24	**1,700** [J]	<0.25	<0.17	<0.13	<0.49	<0.069	<0.077	<0.075	<1.5	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	NA	NA	NA	NA	NA	NA	<2.3	NA	NA
	05/21/14	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-3**	09/30/94	**290**	**72**	<5,000	**29**	**3.2**	**3.3**	**29**	NA	**1.2**	NA	<10	**8.3**	**1.6**	**17**	**8.4**	<0.5	**12**	**1.9**	**12**	<10	NA	NA	NA	NA	NA	**10**	<50	**20**	<20
	04/24/95	**53**	**960**	<5,000	**12**	**0.84**	**0.69**	**2.4**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**29** [1]	**7.1**	**75** [1]	**84** [1]
	02/09/96	NA	NA	NA	**9.6**	**1.4**	**1.2**	**2**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/31/96	NA	NA	NA	**95**	**7**	**19**	**53**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/28/02	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
	09/30/03	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
	09/30/04	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
	03/29/05	**274**	**2,430**	<5,260	**81.0**	**7.8**	**8.0**	**11.5**	**23.6**	<1.00	NA	NA	**73.0**	<1.00	**21.2**	<1.00	<1.00	<1.00	<1.00	<1.00	**9.50**	**1.40**	**12.6**	**1.50**	**2.90**	**5.2**	NA	<5.0	NA	NA
	05/30/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	06/27/07	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
	12/03/07	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
	06/30/08	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
	12/04/08	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
	06/05/09	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
MW-4	12/31/96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	08/28/02	<50	<50	<100	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**24.0** [1]	**11.0** [1]	**77.0** [1]	**78.0** [1]
	09/30/03	<50.0	<50	<5,000	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.50	<0.50	<0.50	<0.50	<0.50	<0.50		<5.0	NA	NA
	09/30/04	<50	**103**	<5,000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.00	NA	NA	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.0	NA	**11.0**	NA	NA
	03/29/05	<100	<100	<5,320	<1.0	<1.0	<1.0	<1.0	<1.0	<1.00	NA	NA	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.0	NA	<5.0	NA	NA
	05/30/06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/06	<50	**87**	<3,500	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<1.0	<0.50	<0.50	<0.50	NA	<400	NA	NA
	06/27/07	<50	<470	<4,800	<2.0	<2.0	<2.0	<4.0	<5.0	NA	<2.0	NA	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	NA	**28**	NA	NA
	12/03/07	<100	<50	<4,700	<0.28	<0.36	<0.25	<0.60	<0.32	NA	<0.40	NA	<0.30	<0.42	<0.27	<0.32	<0.33	<0.30	<0.26	<0.32	<0.41	<0.37	<0.40	<0.25	<0.27	<0.23	NA	<5.0	NA	NA
	06/30/08	<50	<58.8	<5,210	<0.500	<0.500	<0.500	<0.500	<0.500	NA	<0.500	NA	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<5.00	<0.500	<0.500 L	<1.00	<0.500	<0.500	NA	**15.8**	NA	NA
	12/04/08	<50	<50	<2,500	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<11	NA	NA	NA	NA	NA	NA	NA	NA	<2.1	NA	NA	NA	NA	NA	NA	<5.0	NA	NA
	06/05/09	<50	<50	<5,000	<0.50	<0.50	<0.50	<1.0	<5.0	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<2.1	NA	NA	NA	NA	NA	NA	<6.0	NA	NA
	08/21/12	<21	<24	<1,400	<0.25	<0.17	<0.070	<0.49	<0.069	<0.077	<0.075	<1.5	NA	NA	NA	NA	NA	NA	NA	NA	<0.24	NA	NA	NA	NA	NA	NA	<2.3	NA	NA
	01/29/13	<21	<24	<1,400	<0.25	<0.17	<0.13	<0.49	<0.069	<0.077	<0.075	<1.5	NA	NA	NA	NA	NA	NA	NA	NA	<0.24	NA	NA	NA	NA	NA	NA	**6.9**	NA	NA
	05/01/13	<50	<53	**1,900** [J]	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<11	NA	NA	NA	NA	NA	NA	NA	NA	<2.2	NA	NA	NA	NA	NA	NA	**6.3**	NA	NA
	08/21/13	<21	<24	**1,800** [J]	<0.25	<0.17	<0.13	<0.49	<0.069	<0.077	<0.075	<1.5	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	NA	NA	NA	NA	NA	NA	<2.3	NA	NA
	05/21/14	NA	NA	NA	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<9.5	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	NA	NA	NA	NA

TABLE 4
Historical Groundwater Analytical Results
Former Merritt Tire Sales/Goodyear DEX #9578
3430 Castro Valley Boulevard
Castro Valley, California

Groundwater Monitoring Well ID	Sample Date	TPH-GRO	TPH-DRO	O & G / HEM	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	EDC	EDB	DEHP	Vinyl Chloride	1,1 -DCE	1,1 -DCA	cis 1,2-DCE	Chloroform	1,1,1 - TCE	TCE	PCE	Napthalene	n-Butylbenzene	Chloroethane	Isopropylbenzene	n-Propylbenzene	1,2,4-TMBZ	Chromium	Lead	Nickel	Zinc
MW-5	08/21/12	<21	<24	**1,700**[J]	<0.25	<0.17	<0.070	<0.49	**0.17**[J]	<0.077	<0.075	<1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**8.1**	NA	NA
	01/29/13	<21	<24	**1,800**[J]	<0.25	<0.17	<0.13	<0.49	**0.44**[J]	<0.077	<0.075	<1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**5.6**	NA	NA
	05/01/13	<50	<53	<1,500	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5.0	NA	NA
	08/21/13	<21	<24	**1,700**[J]	<0.25	<0.17	<0.13	<0.49	**0.091**[J]	<0.077	<0.075	<1.5	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	NA	NA	NA	NA	NA	NA	**4.3**[J]	NA	NA
	05/21/14	NA	NA	NA	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<9.6	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	NA	NA	NA	NA

Notes:

All groundwater concentrations measured in micrograms per liter (µg/L)

TPH-GRO = Total petroleum hydrocarbons as gasoline range organics; historically analyzed by EPA Method 8015B; beginning December 3, 2007 TPHg analyzed by LUFT GC/MS 8260B

TPH-DRO = Total petroleum hydrocarbons as diesel range organics; analyzed by EPA Method 8015B/3510; beginning August 21, 2012 analyzed by 8015B with silica gel cleanup

HEM = Hexane extractable materials

Oil & Grease = also reported as HEM with silica gel cleanup (SGT-HEM) analyzed by EPA 1664A.

BTEX = benzene, toulene, ethyl-benzene, and total xylenes; historically analyzed by EPA Method 8021B; beginning September 30, 2003 VOCs analyzed by EPA Method 8260B

MTBE = Methyl tert-butyl ether; historically analyzed by EPA Method 8021B; beginning September 30, 2003 volatile organic compounds analyzed by EPA Method 8260B

DEHP = Bis (2-ethylhexyl) phthalate

EDC = 1,2-Dichloroethane analyzed by EPA Method 8260B

EDB = Ethylene Dibromide analyzed by EPA Method 8260B

1,1-DCE = 1,1-Dichloroethene

1,1-DCA = 1,1 Dicholorethane

cis 1,2-DCE = cis 1, 2-Dichloroethene

TCE = Trichloroethene

PCE = Tetrachloroethene

1,1,1 - TCE = 1,1,1 - Trichloroethane

1,2,4 - TMBZ = 1,2,4 - Trimethylbenzene

SWRCB LTCP Closure Criteria = State Water Resources Control Board's (SWRCB) Low-Threat Underground Storage Tank Case Closure Policy (LTCP), Media-Specific Closure Criteria for sites with commercial/industrial use.

(1) = Historical groundwater data as referenced in Secor groundwater monitoring report dated 4/26/05.

NE = No established SWRCB LTCP Closure Criteria

NA = Not Analyzed

NS = Not Sampled

ND = Not Detected - as reported in EMCON's *Expanded Assessment, and Risk-Based Corrective Action Evaluation r* eport, dated March 4, 1997

FP = Free product, well not sampled

L = Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptable limits. Analyte not detected, data not impacted.

* = Due to the laboratory exceeding the hold time for 8260B analysis, MW-1 and MW-2 were resampled on 6/15/06.

** = Groundwater Monitoring Well MW-3 was destroyed September 10, 2009.

[J] = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.

< = Concentration is below method detection limit (MDL) or laboratory reporting limit (RL) when MDL is not presented (see analytical reports for details).

Bold numbers denote concentration levels at or above laboratory reporting limits.

Denote concentration levels at or above SWRCB LTCP Closure Criteria

Table 4-1
Site Conceptual Model

CSM Element	CSM Sub-Element	Description	Data Gap Item #	Resolution
Geology and Hydrogeology	Regional	As described by Stantec's Site Conceptual Model (2014), the lithology encountered in the subsurface beneath the Site during drilling activities consisted predominantly of a yellowish brown to black clay and silty clay underlain by a dark yellowish brown sand, silty sand and gravelly sand. The primary stratigraphic units at the Site are listed below, with the approximate ranges of depth (bgs) each unit was encountered across the Site: • 0 to 14 feet bgs: surface soil typically consists of black to yellowish brown clay to silty clay. • 14 to 20 feet bgs: dark yellowish brown, fine-grained sand with some silt, and brown sand with some gravels. • Below 20 feet bgs: stiff, dry silty clay During the drilling of the borings for monitoring wells MW-1 through MW-4 in the 1990's, first encountered groundwater was at approximately 10 feet bgs. However, when MW-5 was installed in 2012, first encountered groundwater was approximately 14 feet bgs. In all cases after well construction, groundwater stabilized at a shallower depth than first encountered, with historical highs reaching 3.77 feet bgs in MW-3 in March 2005. The fact that static groundwater rises above first encountered groundwater, indicates that groundwater at the Site is under confined or semi-confined conditions.	NA	NA

Table 4-1
Site Conceptual Model (Continued)

CSM Element	CSM Sub-Element	Description	Data Gap Item #	Resolution
Geology and Hydrogeology	Site	According to the California's Groundwater Bulletin 118, the Site belongs to the East Bay Plain Subbasin, which consists of unconsolidated sediments of Quaternary age. The cumulative thickness of the unconsolidated sediments is about 1,000 feet. According to the U.S Department of Agriculture's (USDA) Soil Conservation Service (SCS) soil map, the Site belongs to a Class D hydrologic group, which is defined by very slow infiltration rates due to clayey soils, have a high water table, or are shallow with an impervious layer. Since the groundwater monitoring wells were first installed in 1994, the depth to groundwater has ranged between 3.03 ft bgs (MW-2, March 2005) to 11.25 ft bgs (MW-3, August 2002). Based on information collected by Stantec during the last and most recent groundwater sampling event on August 21, 2013, groundwater flow direction was to the south with a gradient of 0.015 feet per feet. Flow direction and gradient has been fairly consistent since groundwater monitoring was initiated in 1994. A Rose diagram has been prepared (and included as an attachment) for 18 sampling events that have occurred since monitoring wells were installed. Seventeen of the 18 events were within an 18 degree range of each other, with the Vector Mean at approximately 171 degrees (180 degrees is due South).	NA	NA
Surface Water Bodies		San Lorenzo Creek is located approximately 4,500 feet west of the Site. A tributary to San Lorenzo Creek is located approximately 1,000 feet east of the Site. Other water bodies near the Site include the South Reservoir located beyond another tributary to San Lorenzo Creek approximately 3,500 feet west of the Site and Don Castro Reservoir approximately 6,000 feet east of the Site beyond San Lorenzo Creek. San Lorenzo Creek flows from the western slope of the Coast Ranges westward across the East Bay	NA	NA

Table 4-1
Site Conceptual Model (Continued)

CSM Element	CSM Sub-Element	Description	Data Gap Item #	Resolution
		Plain and into the San Francisco and San Pablo bays. Therefore, there is a very low likelihood of a material threat or release to a surface water body within a ¼-mile radius of the Site.		
Nearby Wells		Stantec conducted a sensitive receptor survey consisting of an evaluation of well completion reports for wells located within a 2,000-foot radius of the Site that were available from the DWR and the Alameda County Public Works Agency (ACPWA). Stantec also reviewed available groundwater monitoring reports on the Water Board's Geotracker database for additional wells within the 2,000-foot radius of the Site. The reports reviewed from the DWR did not identify any municipal or water supply wells within a ¼-mile radius of the Site. According to Geotracker, three properties within a ¼-mile radius of the Site have open cases on Geotracker with related petroleum releases. The nearest sensitive receptor (various medical offices) is located approximately 680 feet northeast of the Site. Based on the distance of the closest sensitive receptor (various medical offices) and the mixed-use neighborhood of the Site, there is a low likelihood of a material threat or release to sensitive receptors within a ¼-mile radius of the Site.	NA	NA
Potential Release Source and Volume		A 550-gallon used oil underground storage tank (UST) was removed from the Site prior to 1993, however, a review of available documents indicates that the UST removal was conducted without a permit and details regarding the removal, including date, condition of the UST, or disposal of the UST were unavailable. It was suspected that the former tenant, Merritt Tire & Brake, had the UST removed without Goodyear's knowledge. Based on a 1994 investigation, it was concluded that a release had occurred from the UST and the adjacent soils and the shallow saturated zone was impacted. However, the volume of the release is unknown.	1. Additional soil and groundwater data is needed in the vicinity of the former UST and HL-1.	Additional borings will be advanced in the area of the former UST and the HL-1. Soil and grab-groundwater samples will be collected and analyzed.

Table 4-1
Site Conceptual Model (Continued)

CSM Element	CSM Sub-Element	Description	Data Gap Item #	Resolution
		The only other area where soil data exceeded ESLs was the area of HL-1 next to a hydraulic lift in the service bay area. TPH-DRO and oil & grease were present above the ESLs for shallow soils.		
LNAPL		Since groundwater monitoring was initiated at the Site in 1994, light non-aqueous phase liquid (LNAPL) was only detected infrequently in groundwater monitoring well MW-3, which was immediately downgradient of the UST, between August 2002 and March 2005 and from June 2007 until the well was decommissioned in 2009. LNAPL was not present during the corrective action excavation activities conducted in 2012 nor in any groundwater monitoring wells (other than MW-3) since they were installed through the most recent sampling of all wells in August 2013 and in the recent sampling of MW-4 and MW-5 in May 2014.	NA	NA
Source Removal Activities		Source removal activities consisted of soil excavation in the area of the former UST and included the exterior area in front of service bay numbers 5 through 8 and the AST storage area. Based on the results of previous investigations, the area of the former UST excavated was 15-feet wide (limited by the presence of a high pressure natural gas line to the west and a water line along the Site building to the east), by 60-feet long (the extent of known petroleum impacted soils), and by approximately 8-feet deep (the depth of first-encountered groundwater). The soil excavated was the maximum extent practicable as utilities on the western and eastern flanks limited the lateral extent of excavations in those directions. Approximately 400 pounds of an oxygen releasing compound (ORC) was applied to the overall excavation (i.e., the portion in communication with the first encountered water-bearing zone) prior to placement of backfill. Addition of the ORC was designed to stimulate and enhance bioremediation of petroleum hydrocarbons present in groundwater. The ORC selected for use was a	2. Soil contamination at a depth below the excavation (9-foot bgs and deeper) has not been fully characterized.	Three additional soil borings are proposed, as discussed in the data gaps table.

Table 4-1
Site Conceptual Model (Continued)

CSM Element	CSM Sub-Element	Description	Data Gap Item #	Resolution
		Regenesis product, which is a combination of calcium and oxyhydroxide [CaO(OH)2] and calcium hydroxide [Ca(OH)2].		
Contaminants of Concern		Based on the historical investigations conducted at the Site, TPH-GRO); TPH-DRO; O&G; BTEX; MTBE; vinyl chloride (VC); 1,1-dichloroethane (1,1-DCA); cis-1,2-dichloroethene (cis-1,2-DCE); 2-methylnaphthalene; naphthalene; and low concentrations of metals (chromium, lead, nickel, and zinc) have been detected in soil and groundwater.	3. The former tank area was not assessed for VOCs after the 2012 source removal. In addition, the LTCP dictates that additional analyses are necessary in the area of HL-1.	Any additional soil or groundwater sample analysis will include the appropriate COC for the area to be assessed.
COCs in Soil		Petroleum constituents in soil are less than those listed in the Table of the SWRCB's Low Threat Underground Storage Tank Closure Policy (LTCP) for commercial/industrial properties. Specifically: • None of the soil samples collected from zero to 10 ft bgs contained benzene or ethylbenzene at concentrations above those listed in Table 1 of the LTCP. • Benzene and ethylbenzene concentrations were evaluated using concentrations for commercial/industrial exposure because the Site is not anticipated to be developed for residential use and is not in a residential zone area (Table 1 of SWRCB 2012a). Soil samples were not analyzed for naphthalene and other polycyclic aromatic hydrocarbons (PAHs). However, benzene exclusion criteria are considered conservative for naphthalene given that naphthalene is less volatile than benzene (i.e., has a much lower solubility value and Henry's Law coefficient than benzene), is typically present in gasoline at much lower fractions (SWRCB 2012c). Using SWRCB staff precedent from recent case	4. The soil in the former tank area was not assessed for VOCs after the 2012 source removal. In addition, the LTCP dictates that additional soil analyses are necessary in the area of HL-1.	Additional soil borings to be advanced, as described in the data gaps table.

Table 4-1
Site Conceptual Model (Continued)

CSM Element	CSM Sub-Element	Description	Data Gap Item #	Resolution
		closure reviews, the lack of naphthalene data is not a data gap and site conditions can be assessed by using benzene concentrations (SWRCB 2013): "However, the relative concentration of naphthalene in soil can be conservatively estimated using published relative concentrations of naphthalene and benzene in gasoline." Gasoline mixtures contain approximately 3% benzene and 0.25% naphthalene (Potter, Thomas L. and Simmons, Kathleen, E. 1998). Therefore, benzene can be directly substituted for naphthalene concentrations with a safety factor of ten. Benzene concentrations are below the no significant risk values (NSRVs) (Table 1 of SWRCB 2012a); therefore, it is anticipated that the estimated naphthalene concentrations are also below the NSRVs (Table 1 of SWRCB 2012a) for commercial/ industrial direct contact and volatilization to outdoor air and utility worker direct contact.		
COCs in Groundwater		When initially installed in 1994, groundwater samples from MW-1 (upgradient) and MW-2 (cross-gradient to the UST area) had no detections of petroleum hydrocarbon constituents, VOCs, or metals, with the exception of bis (2-ethylhexyl) phthalate (DEHP) and zinc in MW-1 and chloroform in MW-2. However, MW-3 installed less than 20 feet down-gradient of the UST, had numerous COC detections. Initial sampling at the Site in 1994 and 1995 reported TPH-GRO at concentrations up to 290 micrograms per liter (µg/L), TPH-DRO at concentrations up to 960 µg/L, and BTEX concentrations (benzene and total xylenes) up to 29 µg/L. Benzene was detected in well MW-3 at a concentration of 95 µg/L in 1996, along with total xylenes of up to 53 µg/L. The following VOCs were detected in MW-3: 8.3 µg/L of vinyl chloride; 1.6 µg/L of 1,1-dichloroethene; 17 µg/L of 1,1-dichloroethane; 8.4 µg/L of cis-1,2-dichloroethene; 12 µg/L of 1,1,1-trichloroethane; 1.9 µg/L of trichloroethene (TCE); and, 12 µg/L of	5. Groundwater samples from former monitoring well MW-3 could not historically be collected due to the infrequent presence of LNAPL. Groundwater in this area requires additional assessment to determine the current condition.	Grab-groundwater samples will be collected from soil borings that encounter groundwater within the area of former MW-3.

Table 4-1
Site Conceptual Model (Continued)

CSM Element	CSM Sub-Element	Description	Data Gap Item #	Resolution
		tetrachloroethene (PCE). Chromium, nickel, zinc, and total lead, have been sporadically detected in all Site wells, with lead at concentrations ranging from 5.6 to 28 µg/L. The presence of lead at similar concentrations in all Site wells is likely indicative of a background condition unrelated to the historical release of petroleum hydrocarbons from the UST. Passive free product removal, using adsorbent socks, was implemented between August 2002 and December 2007. During this time, MW-3 was sampled only once, in March 2005, at which time TPH-GRO, TPH-DRO, benzene, and MTBE were detected above ESLs. Free product removal was discontinued in 2007, at the direction of ACEH, along with a requested evaluation of more aggressive remediation techniques. On August 14, 2012, Stantec installed monitoring well MW-5 down-gradient of the remedial corrective excavation, to monitor post-remediation groundwater conditions. Analytical results from four consecutive sampling events of the four remaining Site wells since installing MW-5, indicated O&G (identified by hexane extractable materials [HEM] in the analytical reports) was detected in all four monitoring wells, with concentrations ranging from 910 µg/L in MW-1 to 1,800 µg/L in MW-4. All detections of O&G were "J" qualified, meaning the results are an approximate value less than the reporting limit but greater than or equal to the method detection limit. MTBE was detected in only MW-5, with a concentration of 0.091 µg/L, with the result being "J" qualified. On May 21, 2014 at the direction of the ACEH, Stantec sampled wells MW-4 and MW-5 and analyzed groundwater for the Full Scan of VOCs by EPA Method 8260B and for SVOCs by EPA Method 8270C. Analytical results indicate that there were no detections		

Table 4-1
Site Conceptual Model (Continued)

CSM Element	CSM Sub-Element	Description	Data Gap Item #	Resolution
		above the method detection limits of any analytes in the samples.		
Risk Evaluation		The Site is and has been a tire changing facility since circa 1965 and is zoned by Alameda County as Castro Valley Business District, Subarea 7 (Intensive Retail Core, Castro Valley Central Business District Specific Plan), which allows for commercial uses. A Site specific risk evaluation for this Site is not necessarily applicable as the Site is being compared to the LTCP, which factors in "that many petroleum release cases pose a low threat to human health and the environment." "In the absence of unique attributes of a case or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents, cases that meet the general and media-specific criteria described in the policy pose a low threat to human health, safety or the environment and are appropriate for closure pursuant to Health and Safety Case section 25296.10". "Releases from USTs can impact human health and the environment through contact with any or all of the following contaminated media: groundwater, surface water, soil, and soil vapor. Although this contact can occur through ingestion, dermal contact, or inhalation of the various media, the most common drivers of health risk are ingestion of groundwater from drinking water wells, inhalation of vapors accumulated in buildings, contact with near surface contaminated soil, and inhalation of vapors in the outdoor environment. To simplify implementation, these media and pathways have been evaluated and the most common exposure scenarios have been combined into three media-specific criteria: 1. Groundwater 2. Vapor intrusion to indoor air 3. Direct contact and outdoor air exposure	NA	NA

Table 4-1
Site Conceptual Model (Continued)

CSM Element	CSM Sub-Element	Description	Data Gap Item #	Resolution
		1) Groundwater-specific criteria is met by the facts that: a) The contaminant plume has no water quality exceedances for TPH-GRO, TPH-DRO, benzene, ethylbenzene, MTBE, or naphthalene as presented in the May 2014 groundwater sample results from MW-4 and MW-5 (Table and Certified Analytical Reports attached). b) There is no free product c) The nearest existing water supply well or surface water body is greater than 1000 feet from the defined plume boundary. 2) The facility is still an active commercial tire and auto service center, with workers constantly coming in contact with petroleum hydrocarbon and solvent products all day/every day. Therefore, as the LTCP indicates: "Exposures to petroleum vapors associated with historical fuel system releases are comparatively insignificant relative to exposures from small spills and fugitive vapor releases that typically occur at fueling facilities. Therefore, satisfaction of the media-specific criteria for petroleum vapor intrusion to indoor air is not required at active commercial petroleum fueling facilities, except in cases where release characteristics can be reasonably believed to post an unacceptable health risk." 3) For direct contact with contaminated soil, the exposure route for incidental ingestion, dermal contact, and dust inhalation for a residential and commercial/industrial worker are considered incomplete. These exposure routes for the construction worker are considered a potentially complete pathway, depending on the nature of the work and duration at the Site. For volatilization from soil to outdoor air, vapor inhalation is the potential exposure pathway. Given dilution		

Table 4-1
Site Conceptual Model (Continued)

CSM Element	CSM Sub-Element	Description	Data Gap Item #	Resolution
		effects that take place outdoors, this exposure pathway is considered incomplete for all three potential receptors. For indoor air, this exposure pathway is considered potentially complete for all three potential receptors. For leaching of contaminants from soil to groundwater, the ingestion and dermal pathways for groundwater are considered incomplete, except for the construction worker, as shallow groundwater is not utilized as a drinking water source at the Site. For the construction worker, incidental ingestion and dermal contact is a potentially complete pathway. For volatilization from groundwater to outdoor air, the exposure pathway is considered insignificant due to dilution effects that take place outdoors. For indoor air, volatilization from groundwater to indoor air is considered a potentially complete pathway.		

Table 5-1
Data Gaps Summary and Proposed Investigation

Item	Data Gap Item #	Proposed Investigation	Rationale	Analyses
1	Additional soil and groundwater data is needed in the vicinity of the former UST and HL-1.	Three soil borings will be drilled to collect soil and grab-groundwater samples in the former UST area. A single soil boring will be drilled to collect soil samples in the area of HL-1. Soil borings will be drilled with a limited access drilling rig to first encountered groundwater (approximately 15 feet bgs). Soil will be logged continuously using the Unified Soil Classification System; samples will be collected at 3 foot intervals for analysis. Grab groundwater samples will also be collected from the first encountered groundwater in each soil boring in the former UST area. Please see attached Figure 2 for locations.	The proposed borings and groundwater sampling in the former UST area will be used to determine the current condition of soil and groundwater in the source area post-excavation. The proposed sampling in this area will also assess the effectiveness of the ORC application. This data gap will be reevaluated after the proposed investigation in order to determine if additional assessment of this area is necessary to adequately close this particular data gap. Proposed boring HL-5 will be located adjacent to former boring HL-1 in order to evaluate this area for each of the parameters required under the LTCP. This data gap will be reevaluated after the proposed investigation in order to determine if additional assessment of this area is necessary to adequately close this particular data gap.	Former UST Area: Soil and groundwater samples will be analyzed for TPH-GRO; TPH-DRO; BTEX; VOCs; and PAHs. Former HL-1 Area: Soil sample will be analyzed for TPH-GRO; TPH-DRO; Benzene; Ethylbenzene; Naphthalene; and PAHs.

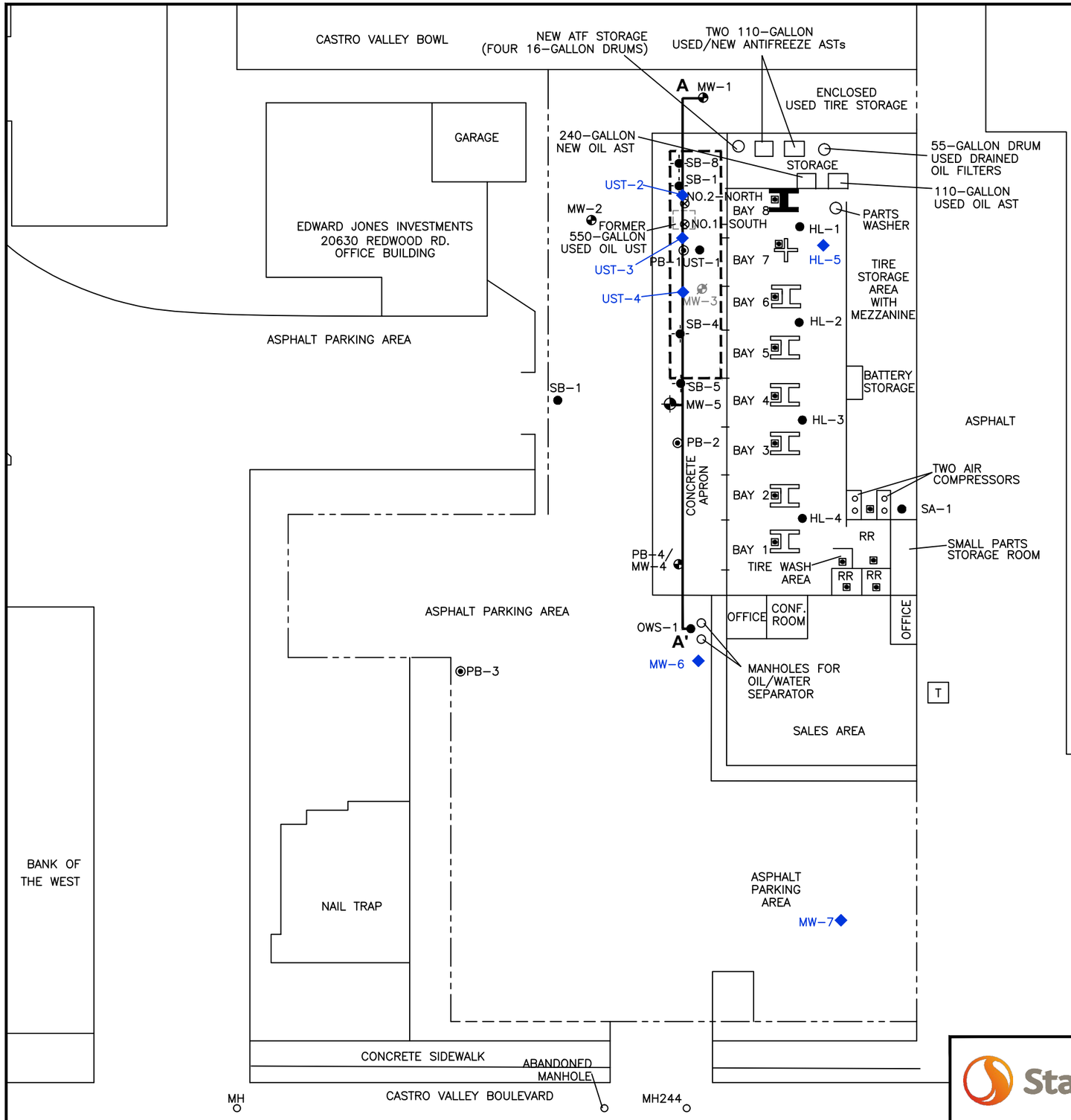
Table 5-1
Data Gaps Summary and Proposed Investigation (Continued)

Item	Data Gap Item #	Proposed Investigation	Rationale	Analyses
2	Soil contamination at a depth below the excavation (9-foot bgs and deeper) has not been fully characterized in the former UST area.	Three soil borings (UST-2, UST-3, and UST-4) will be drilled through the excavation backfill immediately near previous borings No.2-North, No.-1 South, UST-1, and MW-3. The soil borings will be drilled with a limited access drilling rig to first encountered groundwater (approximately 15 feet bgs). Soil will be logged continuously using the Unified Soil Classification System; samples will be collected immediately below the excavation backfill (at approximately 9 feet bgs) and at 3 foot intervals to the target depth for analysis (a couple of feet into groundwater). A grab groundwater sample will also be collected from the first encountered groundwater for analysis. Please see attached Figure 2 for locations.	Soil samples collected below the excavation backfill will be compared to soil TPH sample results previously collected in the vicinity to evaluate the effectiveness of the ORC that was applied in the excavation prior to backfilling. Grab-groundwater analytical results will be used to fill additional data gaps about groundwater impacts in this area.	Soil and groundwater samples will be analyzed for: TPH-GRO; TPH-DRO; BTEX; VOCs; and PAHs.
3	The former tank area was not assessed for VOCs after the 2012 source removal. In addition, the LTCP dictates that additional analyses are necessary in the area of HL-1.	See Items 1 and 2	See Items 1 and 2	See Items 1 and 2

Table 5-1
Data Gaps Summary and Proposed Investigation (Continued)

Item	Data Gap Item #	Proposed Investigation	Rationale	Analyses
4	The soil in the former tank area was not assessed for VOCs after the 2012 source removal. In addition, the LTCP dictates that additional soil analyses are necessary in the area of HL-1.	See Items 1 and 2	See Items 1 and 2	See Items 1 and 2
5	Groundwater samples from former monitoring well MW-3 could not historically be collected due to the infrequent presence of LNAPL. Groundwater in this area requires additional assessment to determine the current condition.	See Items 1 and 2	See Items 1 and 2	See Items 1 and 2

REVISED FIGURES



Stantec
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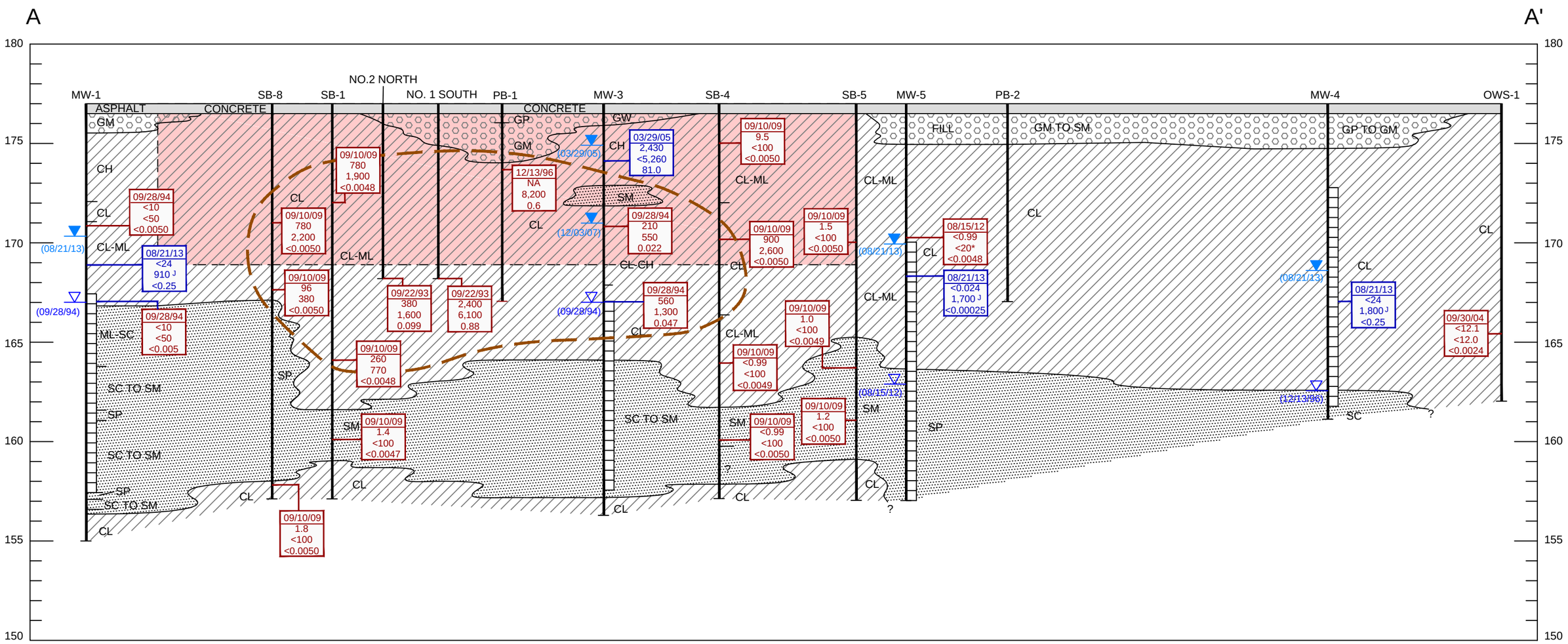
FOR: THE GOODYEAR TIRE AND RUBBER CO.

SITE PLAN WITH CROSS SECTION AND PROPOSED BORING/ MONITORING WELL LOCATIONS
GOODYEAR DEX #9578
3430 CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CALIFORNIA

FIGURE: 2

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185702561	KAM	AJ/KM	GM	06/25/14

FILEPATH:W:\ACTIVE OFFICE LOS GATOS\Goodyear\66050- CASTRO VALLEY\185702724 SCM 2013\185702561-SM14.dwg|kmitchell|Jun 26, 2014 at 15:41|Layout: FIGURE 2



LEGEND:

- GP/GM/GW - GRAVEL/BASE ROCK/FILL
- CH/CL/CL-ML - CLAY/SILTY CLAY
- SC/SM/SP - SAND/SILTY SAND/GRAVELLY SAND
- APPROXIMATE LIMITS OF EXCAVATION (AUGUST 2012)
- SCREENED INTERVAL

(12/03/07) STATIC GROUNDWATER WITH DATE MEASURED

(09/28/04) INITIAL GROUNDWATER WITH DATE MEASURED

GROUNDWATER ANALYTICAL RESULTS

09/28/94 — SAMPLE DATE
560 — TPH-DRO
1,300 — O & G
<0.047 — BENZENE

GROUNDWATER RESULTS IN ug/L (MICROGRAMS PER LITER)

SOIL ANALYTICAL RESULTS

09/10/09 — SAMPLE DATE
1.4 — TPH-DRO
<100 — O & G
<0.0047 — BENZENE

SOIL RESULTS IN mg/kg (MILLIGRAMS PER KILOGRAM)

TPH-DRO= TOTAL PETROLEUM HYDROCARBONS AS DIESEL RANGE ORGANICS

O&G= OIL AND GREASE

TPH-GRO > 100mg/kg OR
TPH-DRO > 50 mg/kg

J RESULT IS LESS THAN THE REPORTING LIMIT, BUT GREATER THAN OR EQUAL TO THE METHOD DETECTION LIMIT AND THE CONCENTRATION IS AN APPROXIMATE VALUE

* LCS OR LCSD EXCEEDS THE CONTROL LIMITS
LCS= LABORATORY CONTROL SPIKE
LCSD= LABORATORY CONTROL SPIKE DUPLICATE

VERTICAL SCALE (1"=5')

HORIZONTAL SCALE (1"=10')

APPROXIMATE SCALE (FEET)

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FOR: THE GOODYEAR TIRE AND RUBBER CO.

GEOLOGIC CROSS SECTION A-A'

GOODYEAR DEX #9578
3430 CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CALIFORNIA

FIGURE: 3

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185702724	KAM	AJ/KM	GM	06/25/14

FILEPATH:W:\ACTIVE OFFICE LOS GATOS\Goodyear\66050- CASTRO VALLEY\185702724 SCM 2013\185702724-SM13XS.dwg|KMitchell|Jun 25, 2014 at 18:07|Layout: XS

SB-8				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
6'	1.4	780	2,200	<0.0050

MW-1				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
6'	<1	<10	<50	<0.005

SB-1				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
5'	1.4	780	1,900	<0.0048

EX-13				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
5'-6'	<0.250	6.8	<170	<0.0049

EX-7				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
~5'	4.9	1,200	600	0.048

MW-2				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
6'	<1	<10	<50	<0.005

PB-1				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
3'-3.5'	120	NA	8,200[1]	0.6

EX-10				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
5'-6'	25	2,300	630	0.085

EX-16				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
6'	0.57	5.5	<170	<0.0050

EX-19				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
6'	<0.250	<1.0	<170	<0.0049

EX-4				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
~5'	<0.240	<1.0	<170	<0.0047

PB-4				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
3'-3.5'	<1	NA	<10	<0.005

EX-11				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
5'-6'	2.4	670	240	<0.0050

EX-5				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
~5'	7.1	980	370	0.014

EX-8				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
~5'	31	2,000	<170	0.12

MW-3				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
6'	4	210	550	0.022

EX-14				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
6'	<0.250	83	<170	<0.005

EX-17				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
6'	<0.24	40	<170	<0.0048

SB-4				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
2'	<0.05	9.5	<100	<0.0050

EX-2				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
~5'	<0.250	<1.0	<170	<0.0049

EX-1				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
~5'	<0.230	<0.99	<170	<0.0045

HL-4				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
5'	NA	<10.2	11.1	NA

CASTRO VALLEY BOWL

ENCLOSED USED TIRE STORAGE

GARAGE

STORAGE

EDWARD JONES INVESTMENTS
20630 REDWOOD RD.

ASPHALT PARKING AREA

BAY 8

BAY 7

BAY 6

BAY 5

BAY 4

BAY 3

BAY 2

BAY 1

CONCRETE APRON

ASPHALT

SALES AREA

FORMER 550-GALLON USED OIL UST

MANHOLES FOR OIL/WATER SEPARATOR

SB-8 EX-20 SB-1 EX-13 EX-11 EX-12 NO.2-NORTH EX-7 EX-5 MW-2 EX-6 PB-1 UST-1 NO.1-SOUTH EX-8 EX-10 EX-9 MW-3 EX-16 EX-14 EX-15 EX-18 EX-19 EX-17 SB-4 EX-3 EX-4 EX-2 EX-1 SB-5 MW-5 PB-2 SA-1 PB-4/ MW-4 OWS-1 PB-3 HL-1 HL-2 HL-3 HL-4 N

LEGEND:

NO.1-SOUTH ⊗ HAND AUGER SAMPLE LOCATION (SEMCO, 1993)

MW-2 GROUNDWATER MONITORING WELL (TOUCHSTONE, 1994)

MW-3 FORMER GROUNDWATER MONITORING WELL

PB-2 FORMER SOIL BORING LOCATION (EMCON, 1997)

OWS-1 FORMER SOIL BORING LOCATION (SECOR, 2004)

SB-4 FORMER SOIL BORING LOCATION (STANTEC, 2009)

MW-5 GROUNDWATER MONITORING WELL (STANTEC, 2012)

EX-1 SOIL SAMPLE LOCATION (STANTEC, 2012)

SB-4 SAMPLE LOCATION REMOVED DURING SUBSEQUENT REMEDIAL CORRECTIVE ACTION

TPH-GRO >100mg/kg OR TPH-DRO >50mg/kg

TPH-GRO= TOTAL PETROLEUM HYDROCARBONS AS GASOLINE RANGE ORGANICS
TPH-DRO= TOTAL PETROLEUM HYDROCARBONS AS DIESEL RANGE ORGANICS
O&G= OIL AND GREASE
B= BENZENE
NA= NOT ANALYZED
SOIL ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)

1 HISTORICAL GROUNDWATER DATA AS REFERENCED IN SECOR GROUNDWATER MONITORING REPORT DATED 4/26/05.

0 15 30
APPROXIMATE SCALE (FEET)

Stantec
15575 LOS GATOS BLVD, BUILDING C
LOS GATOS, CALIFORNIA 95032
PHONE: (408) 356-6124 FAX: (408) 356-6138

FOR: THE GOODYEAR TIRE AND RUBBER CO.

LATERAL EXTENT OF CONTAMINATES IN UNSATURATED ZONE SOIL
GOODYEAR DEX #9578
3430 CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CALIFORNIA

FIGURE: 7

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
182602724	KAM	KM	GM	06/25/14

FILEPATH:W:\ACTIVE OFFICE LOS GATOS\Goodyear\66050- CASTRO VALLEY\185702724 SCM 2013\185702724-SM13D.dwg|KMitchell|Jun 25, 2014 at 17:43|Layout: 7- SOIL-UNSAT

SB-8				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
9'	0.42	96	380	<0.0050
19'	<0.05	1.8	<100	<0.0050

MW-1				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
10'	<1	<10	<50	<0.005

EX-20				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
6.5'	11	2,600	2,600	0.013

SB-1				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
13'	1.5	260	770	<0.0048
17'	<0.047	1.4	<100	<0.0047

NO. 2 - NORTH				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
8'	22	380	1,600	0.099

MW-2				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
10'	<1	<10	<50	<0.005

NO. 1 - SOUTH				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
8'	230	2,400	6,100	0.88

SB-4				
	TPH-GRO	TPH-DRO	O&G	B
7'	<0.05	900	2,600	<0.0050
13'	<0.049	<0.99	<100	<0.0049
17'	<0.05	<0.99	<100	<0.0050

SB-1				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
6.5'	<6.10	<12.1	<12.1	NA

EX-3				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
8'	<0.230	<0.99	<170	<0.0047

SB-5				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
7'	<0.05	1.5	<100	<0.0050
14'	<0.049	1.0	<100	<0.0049
16'	<0.05	1.2	<100	<0.0050

OWS-1				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
11.5'	NA	<12.1	<12.0	<0.0024

EX-12				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
7.75'	1.0	740	<170	<0.0049

EX-6				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
7.75'	5.4	750	510	0.051

HL-1				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
8'	NA	818	899	NA

UST-1				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
7.5'	NA	1,050	2,490	NA

EX-9				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
7.75'	6.3	930	420	0.03

MW-3				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
10'	14	560	1,300	0.047

HL-2				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
12'	NA	<10.1	10.6	NA

EX-15				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
7.75'	2.0	530	<170	<0.0048

EX-18				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
7.75'	1.0	250	<170	<0.0050

HL-3				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
12'	NA	<9.96	10.9	NA

SA-1				
DEPTH	TPH-GRO	TPH-DRO	O&G	B
6.5'	NA	<10.2	NA	NA

CASTRO VALLEY BOWL

MW-1

ENCLOSED USED TIRE STORAGE

STORAGE

EDWARD JONES INVESTMENTS
20630 REDWOOD RD.

ASPHALT PARKING AREA

SB-8
EX-20
SB-1
EX-13
EX-11
NO.2-NORTH
EX-12
EX-7
EX-5
MW-2
FORMER 550-GALLON USED OIL UST
EX-6
NO.1-SOUTH
PB-1
UST-1
EX-8
EX-10
EX-9
MW-3
EX-16
EX-14
EX-15
EX-18
EX-19
EX-17
SB-4
EX-3
EX-2
EX-4
EX-1
SB-5
MW-5
PB-2
CONCRETE APRON
PB-4/MW-4
OWS-1

BAY 8
BAY 7
BAY 6
BAY 5
BAY 4
BAY 3
BAY 2
BAY 1

HL-1
HL-2
HL-3
HL-4

SA-1

ASPHALT

ASPHALT PARKING AREA

SALES AREA

MANHOLES FOR OIL/WATER SEPARATOR

PB-3

LEGEND:

- NO.1-SOUTH ⊗ HAND AUGER SAMPLE LOCATION (SEMCO, 1993)
- MW-2 ◒ GROUNDWATER MONITORING WELL (TOUCHSTONE, 1994)
- MW-3 ⌀ FORMER GROUNDWATER MONITORING WELL
- PB-2 ◉ FORMER SOIL BORING LOCATION (EMCON, 1997)
- OWS-1 ● FORMER SOIL BORING LOCATION (SECOR, 2004)
- SB-4 ✦ FORMER SOIL BORING LOCATION (STANTEC, 2009)
- MW-5 ⊕ GROUNDWATER MONITORING WELL (STANTEC, 2012)
- EX-1 ◒ SOIL SAMPLE LOCATION (STANTEC, 2012)

- - - - TPH-GRO >100mg/kg OR TPH-DRO >50mg/kg

TPH-GRO= TOTAL PETROLEUM HYDROCARBONS AS GASOLINE RANGE ORGANICS
TPH-DRO= TOTAL PETROLEUM HYDROCARBONS AS DIESEL RANGE ORGANICS
O&G= OIL AND GREASE
B= BENZENE
NA= NOT ANALYZED
SOIL ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)

N

0 15 30
APPROXIMATE SCALE (FEET)

Stantec
15575 LOS GATOS BLVD, BUILDING C
LOS GATOS, CALIFORNIA 95032
PHONE: (408) 356-6124 FAX: (408) 356-6138

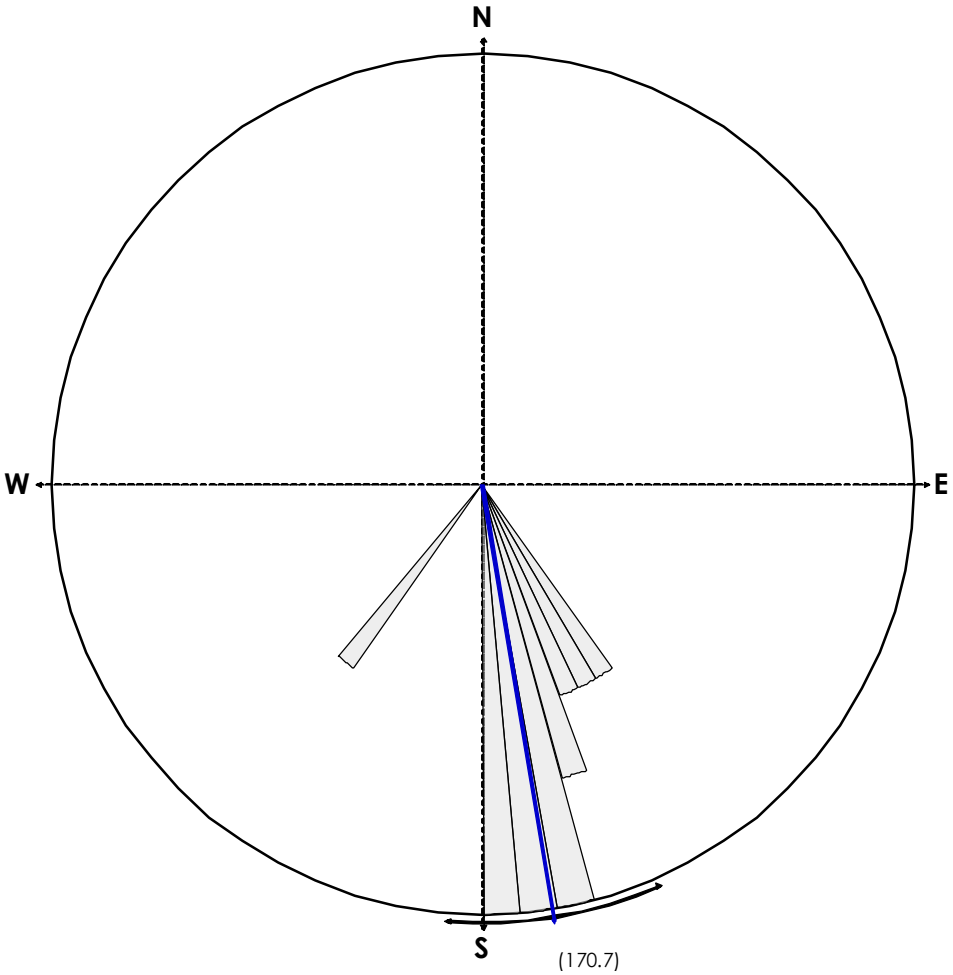
FOR: THE GOODYEAR TIRE AND RUBBER CO.

LATERAL EXTENT OF CONTAMINATES IN SMEAR AND SATURATED SOIL ZONE
GOODYEAR DEX #9578
3430 CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CALIFORNIA

FIGURE: 8

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185702724	KAM	AJ/KM	GM	06/25/14

FILEPATH:W:\ACTIVE OFFICE LOS GATOS\Goodyear\66050- CASTRO VALLEY\185702724 SCM 2013\185702724-SM13D.dwg|KMitchell|Jun 25, 2014 at 17:49|Layout: 8- SOIL-SAT



EQUAL AREA PLOT

Number of Points	18
Class Size	5
Vector Mean	170.73
Vector Magnitude	17.44
Consistency Ratio	0.97

NOTE: ROSE DIAGRAM IS BASED ON THE DIRECTION OF GROUNDWATER FLOW BEGINNING THIRD QUARTER 1994.

Stantec
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Los Gatos, CA 95032
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FOR:	ROSE DIAGRAM	FIGURE:
THE GOODYEAR TIRE AND RUBBER COMPANY	FORMER MERRITT TIRE SALES/ GOODYEAR DEX #9578 3430 CASTRO VALLEY BOULEVARD CASTRO VALLEY, CALIFORNIA	

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185702561	NMB	JRO	AJ	06/17/14

FILEPATH:P:\Other Offices\Los Gatos\185702561_Goodyear\9578_Goodyear 2014.dwg | jopalekopsahl | Jun 17, 2014 at 16:16 | Layout: Fig _Rose

2012 WASTE DISPOSAL CHARACTERIZATION LABORATORY REPORTS

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: 720-43926-1
Client Project/Site: Goodyear - DEX # 9578.3430
Revision: 1

For:
Stantec Consulting Corp.
15575 Los Gatos Blvd
Bldg. C
Los Gatos, California 95032

Attn: Ms. Alicia Falk

Authorized for release by:
9/19/2012 4:49:22 PM

Afsaneh Salimpour
Project Manager I
afsaneh.salimpour@testamericainc.com

Table of Contents

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
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: Stantec Consulting Corp.
Project/Site: Goodyear - DEX # 9578.3430

TestAmerica Job ID: 720-43926-1

Job ID: 720-43926-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-43926-1

Revised Report on 9/19/12

Comments

No additional comments.

Receipt

The samples were received on 8/14/2012 7:08 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.2º C.

GC/MS VOA

No other analytical or quality issues were noted.

GC/MS Semi VOA

No analytical or quality issues were noted.

GC VOA

No analytical or quality issues were noted.

GC Semi VOA

Method(s) 8015B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 119074 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

Metals

No other analytical or quality issues were noted.

General Chemistry

Method(s) 9071B: Insufficient sample volume was available to perform batch matrix spike/matrix spike duplicate (MS/MSD) associated with batch 46801. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

Method(s) 9071B: Analysis for Hexane Extractable Material (HEM) was performed for the following sample(s): EX-1 (720-43926-1), EX-2 (720-43926-2), EX-3 (720-43926-3), EX-4 (720-43926-4). Since the HEM result(s) was below the reporting limit (RL), the result(s) for Silica Gel Treated - Hexane Extractable Material (SGT-HEM) was reported as a non-detect. All HEM quality control criteria were met.

No other analytical or quality issues were noted.

Organic Prep

No analytical or quality issues were noted.

Detection Summary

Client: Stantec Consulting Corp.
Project/Site: Goodyear - DEX # 9578.3430

TestAmerica Job ID: 720-43926-1

Client Sample ID: EX-1 — Lab Sample ID: 720-43926-1

No Detections

Client Sample ID: EX-2 — Lab Sample ID: 720-43926-2

No Detections

Client Sample ID: EX-3 — Lab Sample ID: 720-43926-3

No Detections

Client Sample ID: EX-4 — Lab Sample ID: 720-43926-4

No Detections

Client Sample ID: EX-1,2,3,4 — Lab Sample ID: 720-43926-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	45		1.9		mg/Kg	4		6010B	Total/NA
Nickel	35		1.9		mg/Kg	4		6010B	Total/NA
Lead	8.1		1.9		mg/Kg	4		6010B	Total/NA
Zinc	49		5.8		mg/Kg	4		6010B	Total/NA

Client: Stantec Consulting Corp.
Project/Site: Goodyear - DEX # 9578.3430

TestAmerica Job ID: 720-43926-1

Method: 6010B - Metals (ICP)

Client Sample ID: EX-1,2,3,4
Date Collected: 08/13/12 22:18
Date Received: 08/14/12 07:08

Lab Sample ID: 720-43926-5
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.48		mg/Kg		08/15/12 18:32	08/16/12 18:45	4
Chromium	**45**		1.9		mg/Kg		08/15/12 18:32	08/16/12 18:45	4
Nickel	**35**		1.9		mg/Kg		08/15/12 18:32	08/16/12 18:45	4
Lead	**8.1**		1.9		mg/Kg		08/15/12 18:32	08/16/12 18:45	4
Zinc	**49**		5.8		mg/Kg		08/15/12 18:32	08/16/12 18:45	4

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

Lab Sample ID: MB 720-119100/1-A
Matrix: Solid
Analysis Batch: 119084

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 119100

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.0		ug/Kg		08/14/12 17:00	08/14/12 17:33	1
Benzene	ND		5.0		ug/Kg		08/14/12 17:00	08/14/12 17:33	1
Ethylene Dibromide	ND		5.0		ug/Kg		08/14/12 17:00	08/14/12 17:33	1
1,2-Dichloroethane	ND		5.0		ug/Kg		08/14/12 17:00	08/14/12 17:33	1
Ethylbenzene	ND		5.0		ug/Kg		08/14/12 17:00	08/14/12 17:33	1
Toluene	ND		5.0		ug/Kg		08/14/12 17:00	08/14/12 17:33	1
Xylenes, Total	ND		10		ug/Kg		08/14/12 17:00	08/14/12 17:33	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		08/14/12 17:00	08/14/12 17:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*45 - 131*	*08/14/12 17:00*	*08/14/12 17:33*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*60 - 140*	*08/14/12 17:00*	*08/14/12 17:33*	*1*
Toluene-d8 (Surr)	*102*		*58 - 140*	*08/14/12 17:00*	*08/14/12 17:33*	*1*

Lab Sample ID: LCS 720-119100/2-A
Matrix: Solid
Analysis Batch: 119084

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 119100

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	50.0	56.5		ug/Kg		113	70 - 144
Benzene	50.0	54.8		ug/Kg		110	70 - 130
Ethylene Dibromide	50.0	64.1		ug/Kg		128	70 - 140
1,2-Dichloroethane	50.0	56.2		ug/Kg		112	70 - 130
Ethylbenzene	50.0	55.7		ug/Kg		111	80 - 137
Toluene	50.0	53.6		ug/Kg		107	80 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*113*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*106*		*60 - 140*
Toluene-d8 (Surr)	*111*		*58 - 140*

Lab Sample ID: LCS 720-119100/4-A
Matrix: Solid
Analysis Batch: 119084

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 119100

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C5-C12	1000	949		ug/Kg		95	61 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*106*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*106*		*60 - 140*
Toluene-d8 (Surr)	*112*		*58 - 140*

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

Lab Sample ID: LCSD 720-119100/3-A
Matrix: Solid
Analysis Batch: 119084

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 119100

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether			50.0	54.5		ug/Kg		109	70 - 144	4	20
Benzene			50.0	55.4		ug/Kg		111	70 - 130	1	20
Ethylene Dibromide			50.0	60.2		ug/Kg		120	70 - 140	6	20
1,2-Dichloroethane			50.0	54.1		ug/Kg		108	70 - 130	4	20
Ethylbenzene			50.0	57.3		ug/Kg		115	80 - 137	3	20
Toluene			50.0	54.8		ug/Kg		110	80 - 128	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*111*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*106*		*60 - 140*
Toluene-d8 (Surr)	*111*		*58 - 140*

Lab Sample ID: LCSD 720-119100/5-A
Matrix: Solid
Analysis Batch: 119084

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 119100

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12			1000	973		ug/Kg		97	61 - 128	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*106*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*100*		*60 - 140*
Toluene-d8 (Surr)	*113*		*58 - 140*

Lab Sample ID: MB 720-119130/1-A
Matrix: Solid
Analysis Batch: 119120

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 119130

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.0		ug/Kg		08/15/12 07:00	08/15/12 08:44	1
Benzene	ND		5.0		ug/Kg		08/15/12 07:00	08/15/12 08:44	1
Ethylene Dibromide	ND		5.0		ug/Kg		08/15/12 07:00	08/15/12 08:44	1
1,2-Dichloroethane	ND		5.0		ug/Kg		08/15/12 07:00	08/15/12 08:44	1
Ethylbenzene	ND		5.0		ug/Kg		08/15/12 07:00	08/15/12 08:44	1
Toluene	ND		5.0		ug/Kg		08/15/12 07:00	08/15/12 08:44	1
Xylenes, Total	ND		10		ug/Kg		08/15/12 07:00	08/15/12 08:44	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		08/15/12 07:00	08/15/12 08:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*109*		*45 - 131*	*08/15/12 07:00*	*08/15/12 08:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*60 - 140*	*08/15/12 07:00*	*08/15/12 08:44*	*1*
Toluene-d8 (Surr)	*109*		*58 - 140*	*08/15/12 07:00*	*08/15/12 08:44*	*1*

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

Lab Sample ID: LCS 720-119130/2-A
Matrix: Solid
Analysis Batch: 119120

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 119130

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Methyl tert-butyl ether			50.0	51.7		ug/Kg		103	70 - 144		
Benzene			50.0	50.4		ug/Kg		101	70 - 130		
Ethylene Dibromide			50.0	50.8		ug/Kg		102	70 - 140		
1,2-Dichloroethane			50.0	46.1		ug/Kg		92	70 - 130		
Ethylbenzene			50.0	51.3		ug/Kg		103	80 - 137		
Toluene			50.0	51.1		ug/Kg		102	80 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*113*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*101*		*60 - 140*
Toluene-d8 (Surr)	*111*		*58 - 140*

Lab Sample ID: LCS 720-119130/4-A
Matrix: Solid
Analysis Batch: 119120

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 119130

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) -C5-C12			1000	897		ug/Kg		90	61 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*115*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*104*		*60 - 140*
Toluene-d8 (Surr)	*112*		*58 - 140*

Lab Sample ID: LCSD 720-119130/3-A
Matrix: Solid
Analysis Batch: 119120

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 119130

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether			50.0	57.2		ug/Kg		114	70 - 144	10	20
Benzene			50.0	53.2		ug/Kg		106	70 - 130	5	20
Ethylene Dibromide			50.0	58.1		ug/Kg		116	70 - 140	13	20
1,2-Dichloroethane			50.0	50.7		ug/Kg		101	70 - 130	10	20
Ethylbenzene			50.0	52.0		ug/Kg		104	80 - 137	1	20
Toluene			50.0	50.9		ug/Kg		102	80 - 128	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*111*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*102*		*60 - 140*
Toluene-d8 (Surr)	*113*		*58 - 140*

Lab Sample ID: LCSD 720-119130/5-A
Matrix: Solid
Analysis Batch: 119120

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 119130

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12			1000	933		ug/Kg		93	61 - 128	4	20

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

Lab Sample ID: LCSD 720-119130/5-A
Matrix: Solid
Analysis Batch: 119120

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 119130

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*111*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*103*		*60 - 140*
Toluene-d8 (Surr)	*112*		*58 - 140*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 720-119111/1-A
Matrix: Solid
Analysis Batch: 119203

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 119111

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Bis(2-chloroethyl)ether	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
2-Chlorophenol	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
1,3-Dichlorobenzene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
1,4-Dichlorobenzene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Benzyl alcohol	ND		0.17		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
1,2-Dichlorobenzene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
2-Methylphenol	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Methylphenol, 3 & 4	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
N-Nitrosodi-n-propylamine	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Hexachloroethane	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Nitrobenzene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Isophorone	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
2-Nitrophenol	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
2,4-Dimethylphenol	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Bis(2-chloroethoxy)methane	ND		0.17		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
2,4-Dichlorophenol	ND		0.33		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
1,2,4-Trichlorobenzene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Naphthalene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
4-Chloroaniline	ND		0.17		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Hexachlorobutadiene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
4-Chloro-3-methylphenol	ND		0.17		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
2-Methylnaphthalene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Hexachlorocyclopentadiene	ND		0.17		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
2,4,6-Trichlorophenol	ND		0.17		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
2,4,5-Trichlorophenol	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
2-Chloronaphthalene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
2-Nitroaniline	ND		0.33		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Dimethyl phthalate	ND		0.17		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Acenaphthylene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
3-Nitroaniline	ND		0.17		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Acenaphthene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
2,4-Dinitrophenol	ND		0.66		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
4-Nitrophenol	ND		0.33		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Dibenzofuran	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
2,4-Dinitrotoluene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
2,6-Dinitrotoluene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Diethyl phthalate	ND		0.17		mg/Kg		08/14/12 22:09	08/16/12 12:37	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 720-119111/1-A
Matrix: Solid
Analysis Batch: 119203

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 119111

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		0.17		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Fluorene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
4-Nitroaniline	ND		0.33		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
2-Methyl-4,6-dinitrophenol	ND		0.33		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
N-Nitrosodiphenylamine	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
4-Bromophenyl phenyl ether	ND		0.17		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Hexachlorobenzene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Pentachlorophenol	ND		0.33		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Phenanthrene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Anthracene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Di-n-butyl phthalate	ND		0.17		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Fluoranthene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Pyrene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Butyl benzyl phthalate	ND		0.17		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
3,3'-Dichlorobenzidine	ND		0.17		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Benzo[a]anthracene	ND		0.33		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Bis(2-ethylhexyl) phthalate	ND		0.33		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Chrysene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Di-n-octyl phthalate	ND		0.17		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Benzo[b]fluoranthene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Benzo[a]pyrene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Benzo[k]fluoranthene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Indeno[1,2,3-cd]pyrene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Benzo[g,h,i]perylene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Benzoic acid	ND		0.33		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Azobenzene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1
Dibenz(a,h)anthracene	ND		0.067		mg/Kg		08/14/12 22:09	08/16/12 12:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*80*		*21 - 98*	*08/14/12 22:09*	*08/16/12 12:37*	*1*
2-Fluorobiphenyl	*87*		*30 - 112*	*08/14/12 22:09*	*08/16/12 12:37*	*1*
Terphenyl-d14	*95*		*32 - 117*	*08/14/12 22:09*	*08/16/12 12:37*	*1*
2-Fluorophenol	*86*		*28 - 98*	*08/14/12 22:09*	*08/16/12 12:37*	*1*
Phenol-d5	*80*		*23 - 101*	*08/14/12 22:09*	*08/16/12 12:37*	*1*
2,4,6-Tribromophenol	*80*		*37 - 114*	*08/14/12 22:09*	*08/16/12 12:37*	*1*

Lab Sample ID: LCS 720-119111/2-A
Matrix: Solid
Analysis Batch: 119203

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 119111

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenol	1.66	1.23		mg/Kg		74	48 - 115
Bis(2-chloroethyl)ether	1.66	1.24		mg/Kg		74	45 - 115
2-Chlorophenol	1.66	1.22		mg/Kg		74	48 - 115
1,3-Dichlorobenzene	1.66	1.16		mg/Kg		70	41 - 115
1,4-Dichlorobenzene	1.66	1.09		mg/Kg		66	40 - 115
Benzyl alcohol	1.66	1.33		mg/Kg		80	54 - 115
1,2-Dichlorobenzene	1.66	1.18		mg/Kg		71	44 - 115
2-Methylphenol	1.66	1.27		mg/Kg		76	54 - 115

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 720-119111/2-A
Matrix: Solid
Analysis Batch: 119203

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 119111

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylphenol, 3 & 4	3.32	2.47		mg/Kg		74	42 - 115
N-Nitrosodi-n-propylamine	1.66	1.38		mg/Kg		83	46 - 115
Hexachloroethane	1.66	1.14		mg/Kg		69	44 - 115
Nitrobenzene	1.66	1.22		mg/Kg		73	48 - 115
Isophorone	1.66	1.31		mg/Kg		79	54 - 115
2-Nitrophenol	1.66	1.21		mg/Kg		73	48 - 115
2,4-Dimethylphenol	1.66	1.25		mg/Kg		75	52 - 115
Bis(2-chloroethoxy)methane	1.66	1.30		mg/Kg		78	46 - 115
2,4-Dichlorophenol	1.66	1.26		mg/Kg		76	49 - 100
1,2,4-Trichlorobenzene	1.66	1.21		mg/Kg		73	47 - 115
Naphthalene	1.66	1.25		mg/Kg		75	44 - 115
4-Chloroaniline	1.66	1.04		mg/Kg		62	30 - 115
Hexachlorobutadiene	1.66	1.18		mg/Kg		71	44 - 115
4-Chloro-3-methylphenol	1.66	1.33		mg/Kg		80	58 - 115
2-Methylnaphthalene	1.66	1.21		mg/Kg		73	49 - 115
Hexachlorocyclopentadiene	1.66	1.23		mg/Kg		74	42 - 132
2,4,6-Trichlorophenol	1.66	1.32		mg/Kg		79	45 - 115
2,4,5-Trichlorophenol	1.66	1.27		mg/Kg		76	48 - 115
2-Chloronaphthalene	1.66	1.30		mg/Kg		78	52 - 115
2-Nitroaniline	1.66	1.42		mg/Kg		86	54 - 115
Dimethyl phthalate	1.66	1.35		mg/Kg		82	64 - 119
Acenaphthylene	1.66	1.49		mg/Kg		90	61 - 129
3-Nitroaniline	1.66	1.34		mg/Kg		81	50 - 115
Acenaphthene	1.66	1.34		mg/Kg		81	50 - 115
2,4-Dinitrophenol	1.66	ND		mg/Kg		26	15 - 115
4-Nitrophenol	1.66	1.38		mg/Kg		83	54 - 125
Dibenzofuran	1.66	1.33		mg/Kg		80	55 - 115
2,4-Dinitrotoluene	1.66	1.53		mg/Kg		92	57 - 115
2,6-Dinitrotoluene	1.66	1.42		mg/Kg		86	54 - 119
Diethyl phthalate	1.66	1.39		mg/Kg		84	49 - 117
4-Chlorophenyl phenyl ether	1.66	1.38		mg/Kg		83	57 - 115
Fluorene	1.66	1.38		mg/Kg		83	54 - 115
4-Nitroaniline	1.66	1.41		mg/Kg		85	59 - 115
2-Methyl-4,6-dinitrophenol	1.66	0.879		mg/Kg		53	39 - 115
N-Nitrosodiphenylamine	1.66	1.41		mg/Kg		85	56 - 115
4-Bromophenyl phenyl ether	1.66	1.41		mg/Kg		85	53 - 115
Hexachlorobenzene	1.66	1.45		mg/Kg		88	55 - 115
Pentachlorophenol	1.66	1.05		mg/Kg		63	35 - 115
Phenanthrene	1.66	1.45		mg/Kg		87	54 - 115
Anthracene	1.66	1.48		mg/Kg		89	55 - 115
Di-n-butyl phthalate	1.66	1.53		mg/Kg		92	55 - 115
Fluoranthene	1.66	1.56		mg/Kg		94	54 - 115
Pyrene	1.66	1.62		mg/Kg		97	48 - 115
Butyl benzyl phthalate	1.66	1.69		mg/Kg		102	53 - 115
3,3'-Dichlorobenzidine	1.66	1.48		mg/Kg		89	42 - 115
Benzo[a]anthracene	1.66	1.58		mg/Kg		95	55 - 115
Bis(2-ethylhexyl) phthalate	1.66	1.64		mg/Kg		99	53 - 115
Chrysene	1.66	1.60		mg/Kg		96	58 - 115
Di-n-octyl phthalate	1.66	1.68		mg/Kg		101	53 - 115
Benzo[b]fluoranthene	1.66	1.38		mg/Kg		83	56 - 115

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 720-119111/2-A
Matrix: Solid
Analysis Batch: 119203

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 119111

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzo[a]pyrene			1.66	1.37		mg/Kg		83	55 - 115		
Benzo[k]fluoranthene			1.66	1.43		mg/Kg		86	57 - 115		
Indeno[1,2,3-cd]pyrene			1.66	1.36		mg/Kg		82	56 - 115		
Benzo[g,h,i]perylene			1.66	1.35		mg/Kg		81	56 - 115		
Benzoic acid			1.66	ND		mg/Kg		18	10 - 115		
Azobenzene			1.66	1.42		mg/Kg		86	52 - 115		
Dibenz(a,h)anthracene			1.66	1.38		mg/Kg		83	58 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5	*76*		*21 - 98*
2-Fluorobiphenyl	*82*		*30 - 112*
Terphenyl-d14	*99*		*32 - 117*
2-Fluorophenol	*76*		*28 - 98*
Phenol-d5	*80*		*23 - 101*
2,4,6-Tribromophenol	*90*		*37 - 114*

Lab Sample ID: LCSD 720-119111/3-A
Matrix: Solid
Analysis Batch: 119203

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 119111

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phenol			1.66	1.23		mg/Kg		74	48 - 115	0	35
Bis(2-chloroethyl)ether			1.66	1.26		mg/Kg		76	45 - 115	2	35
2-Chlorophenol			1.66	1.23		mg/Kg		74	48 - 115	1	35
1,3-Dichlorobenzene			1.66	1.19		mg/Kg		72	41 - 115	2	35
1,4-Dichlorobenzene			1.66	1.11		mg/Kg		67	40 - 115	2	35
Benzyl alcohol			1.66	1.34		mg/Kg		81	54 - 115	1	35
1,2-Dichlorobenzene			1.66	1.22		mg/Kg		73	44 - 115	3	35
2-Methylphenol			1.66	1.27		mg/Kg		76	54 - 115	0	35
Methylphenol, 3 & 4			3.32	2.44		mg/Kg		74	42 - 115	1	35
N-Nitrosodi-n-propylamine			1.66	1.41		mg/Kg		85	46 - 115	2	35
Hexachloroethane			1.66	1.15		mg/Kg		69	44 - 115	0	35
Nitrobenzene			1.66	1.21		mg/Kg		73	48 - 115	1	35
Isophorone			1.66	1.29		mg/Kg		78	54 - 115	1	35
2-Nitrophenol			1.66	1.21		mg/Kg		73	48 - 115	1	35
2,4-Dimethylphenol			1.66	1.22		mg/Kg		74	52 - 115	2	35
Bis(2-chloroethoxy)methane			1.66	1.29		mg/Kg		78	46 - 115	1	35
2,4-Dichlorophenol			1.66	1.25		mg/Kg		75	49 - 100	1	35
1,2,4-Trichlorobenzene			1.66	1.22		mg/Kg		74	47 - 115	1	35
Naphthalene			1.66	1.25		mg/Kg		75	44 - 115	0	35
4-Chloroaniline			1.66	1.05		mg/Kg		63	30 - 115	1	35
Hexachlorobutadiene			1.66	1.21		mg/Kg		73	44 - 115	2	35
4-Chloro-3-methylphenol			1.66	1.32		mg/Kg		80	58 - 115	1	35
2-Methylnaphthalene			1.66	1.19		mg/Kg		72	49 - 115	2	35
Hexachlorocyclopentadiene			1.66	1.25		mg/Kg		75	42 - 132	1	35
2,4,6-Trichlorophenol			1.66	1.31		mg/Kg		79	45 - 115	0	35
2,4,5-Trichlorophenol			1.66	1.31		mg/Kg		79	48 - 115	3	35
2-Chloronaphthalene			1.66	1.34		mg/Kg		81	52 - 115	3	35
2-Nitroaniline			1.66	1.41		mg/Kg		85	54 - 115	1	35

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 720-119111/3-A
Matrix: Solid
Analysis Batch: 119203

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 119111

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dimethyl phthalate			1.66	1.40		mg/Kg		84	64 - 119	3	35
Acenaphthylene			1.66	1.49		mg/Kg		90	61 - 129	0	35
3-Nitroaniline			1.66	1.38		mg/Kg		83	50 - 115	3	35
Acenaphthene			1.66	1.35		mg/Kg		81	50 - 115	1	35
2,4-Dinitrophenol			1.66	ND		mg/Kg		19	15 - 115	33	35
4-Nitrophenol			1.66	1.33		mg/Kg		80	54 - 125	4	35
Dibenzofuran			1.66	1.37		mg/Kg		82	55 - 115	3	35
2,4-Dinitrotoluene			1.66	1.49		mg/Kg		90	57 - 115	3	35
2,6-Dinitrotoluene			1.66	1.41		mg/Kg		85	54 - 119	1	35
Diethyl phthalate			1.66	1.42		mg/Kg		86	49 - 117	2	35
4-Chlorophenyl phenyl ether			1.66	1.38		mg/Kg		83	57 - 115	0	35
Fluorene			1.66	1.39		mg/Kg		84	54 - 115	1	35
4-Nitroaniline			1.66	1.41		mg/Kg		85	59 - 115	0	35
2-Methyl-4,6-dinitrophenol			1.66	0.764		mg/Kg		46	39 - 115	14	35
N-Nitrosodiphenylamine			1.66	1.41		mg/Kg		85	56 - 115	0	35
4-Bromophenyl phenyl ether			1.66	1.36		mg/Kg		82	53 - 115	4	35
Hexachlorobenzene			1.66	1.44		mg/Kg		87	55 - 115	1	35
Pentachlorophenol			1.66	0.999		mg/Kg		60	35 - 115	5	35
Phenanthrene			1.66	1.44		mg/Kg		87	54 - 115	1	35
Anthracene			1.66	1.44		mg/Kg		87	55 - 115	2	35
Di-n-butyl phthalate			1.66	1.49		mg/Kg		90	55 - 115	2	35
Fluoranthene			1.66	1.56		mg/Kg		94	54 - 115	0	35
Pyrene			1.66	1.69		mg/Kg		102	48 - 115	4	35
Butyl benzyl phthalate			1.66	1.66		mg/Kg		100	53 - 115	2	35
3,3'-Dichlorobenzidine			1.66	1.53		mg/Kg		92	42 - 115	3	35
Benzo[a]anthracene			1.66	1.61		mg/Kg		97	55 - 115	2	35
Bis(2-ethylhexyl) phthalate			1.66	1.68		mg/Kg		101	53 - 115	2	35
Chrysene			1.66	1.56		mg/Kg		94	58 - 115	2	35
Di-n-octyl phthalate			1.66	1.65		mg/Kg		100	53 - 115	2	35
Benzo[b]fluoranthene			1.66	1.32		mg/Kg		79	56 - 115	5	35
Benzo[a]pyrene			1.66	1.39		mg/Kg		84	55 - 115	1	35
Benzo[k]fluoranthene			1.66	1.46		mg/Kg		88	57 - 115	2	35
Indeno[1,2,3-cd]pyrene			1.66	1.36		mg/Kg		82	56 - 115	0	35
Benzo[g,h,i]perylene			1.66	1.36		mg/Kg		82	56 - 115	1	35
Benzoic acid			1.66	ND		mg/Kg		12	10 - 115	35	35
Azobenzene			1.66	1.29		mg/Kg		78	52 - 115	10	35
Dibenz(a,h)anthracene			1.66	1.38		mg/Kg		83	58 - 115	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Nitrobenzene-d5	*76*		*21 - 98*
2-Fluorobiphenyl	*84*		*30 - 112*
Terphenyl-d14	*98*		*32 - 117*
2-Fluorophenol	*77*		*28 - 98*
Phenol-d5	*80*		*23 - 101*
2,4,6-Tribromophenol	*87*		*37 - 114*

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

Lab Sample ID: MB 720-119074/1-A
Matrix: Solid
Analysis Batch: 119112

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 119074

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		2.0		mg/Kg		08/14/12 14:22	08/15/12 11:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)				*08/14/12 14:22*	*08/15/12 11:30*	*1*
p-Terphenyl	*100*		*40 - 130*	*08/14/12 14:22*	*08/15/12 11:30*	*1*

Lab Sample ID: LCS 720-119074/2-A
Matrix: Solid
Analysis Batch: 119112

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 119074

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	166	144		mg/Kg		87	50 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*94*		*40 - 130*

Lab Sample ID: LCSD 720-119074/3-A
Matrix: Solid
Analysis Batch: 119112

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 119074

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	162	143		mg/Kg		88	50 - 150	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*93*		*40 - 130*

Lab Sample ID: MB 720-119244/1-A
Matrix: Solid
Analysis Batch: 119274

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 119244

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		08/16/12 16:35	08/17/12 20:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.006*		*0 - 1*	*08/16/12 16:35*	*08/17/12 20:06*	*1*
p-Terphenyl	*84*		*38 - 148*	*08/16/12 16:35*	*08/17/12 20:06*	*1*

Lab Sample ID: LCS 720-119244/2-A
Matrix: Solid
Analysis Batch: 119274

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 119244

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	82.2	56.0		mg/Kg		68	36 - 112

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*80*		*38 - 148*

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

Lab Sample ID: LCSD 720-119244/3-A
Matrix: Solid
Analysis Batch: 119274

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 119244

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			82.5	56.6		mg/Kg		69	36 - 112	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*83*		*38 - 148*

Lab Sample ID: 720-43926-2 MS
Matrix: Solid
Analysis Batch: 119275

Client Sample ID: EX-2
Prep Type: Silica Gel Cleanup
Prep Batch: 119244

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	ND		82.2	30.8	F	mg/Kg		37	50 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
p-Terphenyl	*40*		*38 - 148*

Lab Sample ID: 720-43926-2 MSD
Matrix: Solid
Analysis Batch: 119275

Client Sample ID: EX-2
Prep Type: Silica Gel Cleanup
Prep Batch: 119244

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	ND		82.7	44.5	F	mg/Kg		54	50 - 150	36	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
p-Terphenyl	*57*		*38 - 148*

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 720-119103/1-A
Matrix: Solid
Analysis Batch: 119289

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 119103

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.50		mg/Kg		08/14/12 19:15	08/16/12 21:47	1

Lab Sample ID: LCS 720-119103/2-A
Matrix: Solid
Analysis Batch: 119289

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 119103

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead			50.0	49.9		mg/Kg		100	80 - 120

Lab Sample ID: LCSD 720-119103/3-A
Matrix: Solid
Analysis Batch: 119289

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 119103

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead			50.0	49.9		mg/Kg		100	80 - 120	0	20

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCSSRM 720-119103/25-A
Matrix: Solid
Analysis Batch: 119289

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 119103

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	280	270		mg/Kg		96	62 - 113

Lab Sample ID: MB 720-119172/1-A
Matrix: Solid
Analysis Batch: 119265

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 119172

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.13	0.012	mg/Kg		08/15/12 18:32	08/16/12 18:22	1
Chromium	ND		0.50	0.053	mg/Kg		08/15/12 18:32	08/16/12 18:22	1
Nickel	ND		0.50	0.051	mg/Kg		08/15/12 18:32	08/16/12 18:22	1
Lead	ND		0.50	0.11	mg/Kg		08/15/12 18:32	08/16/12 18:22	1
Zinc	ND		1.5	0.64	mg/Kg		08/15/12 18:32	08/16/12 18:22	1

Lab Sample ID: LCS 720-119172/2-A
Matrix: Solid
Analysis Batch: 119265

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 119172

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	50.0	49.4		mg/Kg		99	80 - 120
Chromium	50.0	50.7		mg/Kg		101	80 - 120
Nickel	50.0	48.2		mg/Kg		96	80 - 120
Lead	50.0	47.9		mg/Kg		96	80 - 120
Zinc	50.0	49.1		mg/Kg		98	80 - 120

Lab Sample ID: LCSD 720-119172/3-A
Matrix: Solid
Analysis Batch: 119265

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 119172

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	50.0	48.6		mg/Kg		97	80 - 120	2	20
Chromium	50.0	50.0		mg/Kg		100	80 - 120	1	20
Nickel	50.0	47.5		mg/Kg		95	80 - 120	1	20
Lead	50.0	47.1		mg/Kg		94	80 - 120	2	20
Zinc	50.0	48.4		mg/Kg		97	80 - 120	1	20

Lab Sample ID: LCSSRM 720-119172/25-A
Matrix: Solid
Analysis Batch: 119265

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 119172

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	42.0	38.4		mg/Kg		92	67 - 118
Chromium	269	262		mg/Kg		97	67 - 121
Nickel	106	89.2		mg/Kg		84	65 - 117
Lead	280	237		mg/Kg		85	62 - 113
Zinc	574	521		mg/Kg		91	62 - 110

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 720-43926-5 MS — **Client Sample ID: EX-1,2,3,4**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 119265 — **Prep Batch: 119172**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	ND		48.5	44.9		mg/Kg		92	75 - 125
Chromium	45		48.5	90.5		mg/Kg		94	75 - 125
Nickel	35		48.5	78.2		mg/Kg		88	75 - 125
Lead	8.1		48.5	51.6		mg/Kg		90	75 - 125
Zinc	49		48.5	93.8		mg/Kg		93	75 - 125

Lab Sample ID: 720-43926-5 MSD — **Client Sample ID: EX-1,2,3,4**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 119265 — **Prep Batch: 119172**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	ND		46.7	43.4		mg/Kg		93	75 - 125	3	20
Chromium	45		46.7	92.0		mg/Kg		101	75 - 125	2	20
Nickel	35		46.7	76.0		mg/Kg		87	75 - 125	3	20
Lead	8.1		46.7	50.3		mg/Kg		90	75 - 125	3	20
Zinc	49		46.7	91.0		mg/Kg		91	75 - 125	3	20

Method: 9071B - HEM and SGT-HEM

Lab Sample ID: MB 440-46755/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46801 — **Prep Batch: 46755**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	ND		200	24	mg/Kg		08/21/12 11:26	08/21/12 13:37	1
SGT-HEM	ND		170	20	mg/Kg		08/21/12 11:26	08/21/12 13:37	1

Lab Sample ID: LCS 440-46755/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46801 — **Prep Batch: 46755**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	333	337		mg/Kg		101	78 - 114
SGT-HEM	167	170		mg/Kg		102	70 - 110

Lab Sample ID: LCSD 440-46755/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46801 — **Prep Batch: 46755**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HEM	333	320		mg/Kg		96	78 - 114	5	11
SGT-HEM	167	ND		mg/Kg		92	70 - 110	12	15

QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: Goodyear - DEX # 9578.3430

TestAmerica Job ID: 720-43926-1

Metals

Prep Batch: 119172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43926-5	EX-1,2,3,4	Total/NA	Solid	3050B	

Analysis Batch: 119265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43926-5	EX-1,2,3,4	Total/NA	Solid	6010B	119172

Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: Goodyear - DEX # 9578.3430

TestAmerica Job ID: 720-43926-1

Client Sample ID: EX-1,2,3,4
Date Collected: 08/13/12 22:18
Date Received: 08/14/12 07:08

Lab Sample ID: 720-43926-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			119172	08/15/12 18:32	CDT	TAL SF
Total/NA	Analysis	6010B		4	119265	08/16/12 18:45	BA	TAL SF

Laboratory References:

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

Certification Summary

Client: Stantec Consulting Corp.
Project/Site: Goodyear - DEX # 9578.3430

TestAmerica Job ID: 720-43926-1

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	01-31-14

Method Summary

Client: Stantec Consulting Corp.
Project/Site: Goodyear - DEX # 9578.3430

TestAmerica Job ID: 720-43926-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL SF

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: Stantec Consulting Corp.
Project/Site: Goodyear - DEX # 9578.3430

TestAmerica Job ID: 720-43926-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-43926-1	EX-1	Solid	08/13/12 22:22	08/14/12 07:08
720-43926-2	EX-2	Solid	08/13/12 22:18	08/14/12 07:08
720-43926-3	EX-3	Solid	08/13/12 22:28	08/14/12 07:08
720-43926-4	EX-4	Solid	08/13/12 22:25	08/14/12 07:08
720-43926-5	EX-1,2,3,4	Solid	08/13/12 22:18	08/14/12 07:08

CHAIN OF CUSTODY RECORD

JDE NO. 3862

140133

720.43926

9/19/2012

GOODYEAR

TestAmerica
1220 Quarry Lane
Pleasanton, CA 94566

Phone: 925.484.1919

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
State in which sampling occurred _____
Compliance Monitoring? Yes No
Enforcement Action? Yes No

Client Name: Stantec
Address: 15575 Los Gatos Boulevard, Building C
City/State/Zip: Los Gatos, CA 95032
Project Manager: Jack Hardin email: jack.hardin@stantec.com
Telephone Number: 408-356-6124 Fax No.: 408-356-6138
Sampler Name: (Print) Tristan Rhodes
Sampler Signature:
PO & Quote Number: ~~Goodyear PO No. C4121~~ PO#: 4504943694 (7/10/2012) ~~Quote No. Posted on TestAmerica Oasis 12-17-08~~

Report To: Jack Hardin
Invoice To: Karen Burlingame Goodyear Dept. 110F 1144 E.Market St. Akron, OH 44136-0001
Invoice email: karen.burlingame@goodyear.com
Territory ID: Former Goodyear DEX#1693
Project No & ID: 185702561.200.0001

5.2°C

Sample ID	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Preservative: HNO_3 (Red Label)	HCl (Blue Label)	NaOH (Orange Label)	H_2SO_4 Plastic (Yellow Label)	H_2SO_4 Glass/Yellow Label)	None (Black Label)	Other (Specify)	Matrix: Groundwater	Soil	Other (specify)	Analyze For: 8015 - TPH-DRO (C10 to C28)	~~8015 - TPH-ORO (C16 to C36)~~	~~8260B - TPH-GRO (C4 TO C12)~~	~~8260B - VOCs~~	TPH-GRO (8015B)	TRPH (1664)	BTEX (8260B)	MTBE (8260B)	SVOCs (8270C)	Pb (6010B)	Lead scavengers (EDC and EDB) (8260B)	RUSH TAT (Pre-Schedule)	RUSH Due Date	Standard TAT-10 Business Day	Fax Results	TestAmerica QC Level 2	Electronic Deliverables	REMARKS
EX-1	8/13/12	2222	1	X								X			X		X				X	X	X	X	X	X	X			X			X	
EX-2	8/13/12	2218	1	X								X			X		X				X	X	X	X	X	X	X			X			X	EDF Required
EX-3	8/13/12	2228	1	X								X			X		X				X	X	X	X	X	X	X			X			X	
EX-4	8/13/12	2225	1	X								X			X		X				X	X	X	X	X	X	X			X			X	

Special Instructions: **A copy of the chain of custody must accompany each invoice to Goodyear for payment !!! Detection limits (in ppb) for all analytes must not exceed the following values:**

EDF REQUIRED GLOBAL ID = SL0608145303 SEND ANALYTICAL REPORTS TO alicia.falk@stantec.com

Laboratory Comments:
Temperature Upon Receipt:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N

Relinquished by:	Date	Time	Received by:	Date	Time
	8/14/12	0600	Billy L. Linn	8-14-12	0600
Relinquished by:	Date	Time	Received by TestAmerica:	Date	Time
Billy L. Linn	8-14-12	7:08		8/14/12	0708

** Level 4 Deliverables is a Full CLP like data package there is a **surcharge** on all Level 4 data packages.

CHAIN OF CUSTODY RECORD

JDE NO. 3862

720 43926 - COPY

140133

9/19/2012

TestAmerica
1220 Quarry Lane
Pleasanton, CA 94566
Phone: 925.484.1919

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
State in which sampling occurred _____
Compliance Monitoring? Yes No
Enforcement Action? Yes No

Client Name: Stantec
Address: 15575 Los Gatos Boulevard, Building C
City/State/Zip: Los Gatos, CA 95032
Project Manager: Jack Hardin email: jack.hardin@stantec.com
Telephone Number: 408-356-6124 Fax No.: 408-356-6138
Sampler Name: (Print) Tristan Rhodes
Sampler Signature:
PO & Quote Number: ~~Goodyear PO#: C4121~~ Goodyear P.O. C4121 ~~Quote No. Posted on TestAmerica Oasis 12-17-08~~ AF
AF PO#: 4504943694 (7/10/2012) Sent Quote as Posted on TestAmerica Oasis 12-17-08

Report To: Jack Hardin
Invoice To: Karen Burlingame Goodyear Dept. 110F 1144 E.Market St. Akron, OH 44136-0001
Invoice email: karen.burlingame@goodyear.com
Territory ID: ~~Former Goodyear DEX#1693~~ 9578 3480 Castro Valley Blvd
Project No & ID: 185702561.200.0001

5.2°C

Sample ID	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Preservative: HNO_3 (Red Label)	Preservative: HCl (Blue Label)	Preservative: NaOH (Orange Label)	Preservative: H_2SO_4 Plastic (Yellow Label)	Preservative: H_2SO_4 Glass (Yellow Label)	Preservative: None (Black Label)	Preservative: Other (Specify)	Matrix: Groundwater	Matrix: Soil	Matrix: Other (specify)	Analyze For: 8015 - TPH-DRO (C10 to C28)	~~8015 - TPH-ORO (C16 to C36)~~	~~8260B - TPH-GRO (C4 TO C12)~~	~~8260B - VOCs~~	TPH-GRO (8015B)	TRPH (1664)	BTEX (8260B)	MTBE (8260B)	SVOCs (8270C)	Pb (6010B)	Lead scavengers (EDC and EDB) (8260B)	RUSH TAT (Pre-Schedule)	RUSH Due Date	Standard TAT-10 Business Day	Fax Results	TestAmerica QC Level 2	Electronic Deliverables	REMARKS
EX-1	8/13/12	2222	1	X								X			X		X				X	X	X	X	X	X	X						X	EDF Required
EX-2	8/13/12	2218	1	X								X			X		X				X	X	X	X	X	X	X						X	
EX-3	8/13/12	2228	1	X								X			X		X				X	X	X	X	X	X	X						X	
EX-4	8/13/12	2225	1	X								X			X		X				X	X	X	X	X	X	X						X	

Special Instructions: A copy of the chain of custody must accompany each invoice to Goodyear for payment !!! Detection limits (in ppb) for all analytes must not exceed the following values:

AF TR0001801

EDF REQUIRED GLOBAL ID = ~~SL0608145303~~ SEND ANALYTICAL REPORTS TO alicia.falk@stantec.com

Laboratory Comments:
Temperature Upon Receipt:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N

Relinquished by:	Date	Time	Received by:	Date	Time
	8/14/12	0600	Billy L. Lemm	8-14-12	0600
Relinquished by:	Date	Time	Received by TestAmerica:	Date	Time
Billy L. Lemm	8-14-12	7:08		8/14/12	0708

** Level 4 Deliverables is a Full CLP like data package there is a surcharge on all Level 4 data packages.

Salimpour, Afsaneh 720-43926

From: Falk, Alicia [Alicia.Falk@stantec.com]
Sent: Wednesday, August 15, 2012 9:32 AM
To: Salimpour, Afsaneh
Cc: Hardin, Jack
Subject: Goodyear Castro Valley - Additional Analytes Requested
Importance: High

Good Morning Afsaneh,

The landfill is requiring we provide them with additional analytes. Can you please run a composite of the four soil samples submitted on August 13, 2012 (EX-1 through EX-4) for LUFT 5 Metals on standard TAT?

Thank you,
Please note name change

Alicia Jansen (formerly Falk)
Project Scientist
Stantec
15575 Los Gatos Boulevard Building C
Los Gatos CA 95032-2569
Ph: (408) 356-6124 Ext. 261
Fx: (408) 356-6138
Cell: (408) 458-6357
alicia.falk@stantec.com
stantec.com

Salimpour, Afsaneh

From: Falk, Alicia [Alicia.Falk@stantec.com]
Sent: Thursday, August 16, 2012 9:02 AM
To: Salimpour, Afsaneh
Cc: Hardin, Jack; Messerotes, Gary; Rhodes, Tristan
Subject: Goodyear Castro Valley - Additional Analytes
Attachments: Rev COC 43958.pdf; REV COC 081312.pdf

Good Morning Afsaneh,

Attached are revised COCs for the samples submitted for the Goodyear Castro Valley Site on 8/13 and 8/14. Please add a "COMP-1" and make a composite of the four soil samples (EX-1 through EX-4) and analyze it for LUFT F Metals.

Also for the samples submitted on 8/13 and 8/14, please analyze all samples for TPH-DRO with and without silica gel cleanup.

Thank you,
Please note name change

Alicia Jansen (formerly Falk)
Project Scientist
Stantec
15575 Los Gatos Boulevard Building C
Los Gatos CA 95032-2569
Ph: (408) 356-6124 Ext. 261
Fx: (408) 356-6138
Cell: (408) 458-6357
alicia.falk@stantec.com
stantec.com

From: Salimpour, Afsaneh [mailto:afsaneh.salimpour@testamericainc.com]
Sent: Wednesday, August 15, 2012 6:56 PM
To: Falk, Alicia
Subject: Sample Login Confirmation for 720-43958, Goodyear -DEX No.9578,3430 Castro Valley

AFSANEH SALIMPOUR

TestAmerica Pleasanton
THE LEADER IN ENVIRONMENTAL TESTING

Tel: 925.484.1919
www.testamericainc.com

Reference: [110142]
Attachments: 3

Login Sample Receipt Checklist

Client: Stantec Consulting Corp.

Job Number: 720-43926-1

Login Number: 43926

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Apostol, Anita

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

Login Sample Receipt Checklist

Client: Stantec Consulting Corp.

Job Number: 720-43926-1

Login Number: 43926
List Number: 1
Creator: Perez, Angel

List Source: TestAmerica Irvine
List Creation: 08/15/12 11:43 PM

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

Login Sample Receipt Checklist

Client: Stantec Consulting Corp.

Job Number: 720-43926-1

Login Number: 43926

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Apostol, Anita

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
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Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Login Sample Receipt Checklist

Client: Stantec Consulting Corp.

Job Number: 720-43926-1

Login Number: 43926
List Number: 1
Creator: Perez, Angel

List Source: TestAmerica Irvine
List Creation: 08/15/12 11:43 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
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The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
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COC is filled out with all pertinent information.	True	
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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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
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: 720-44090-1
Client Project/Site: Goodyear DEX#9578,3430 Castro Valley

For:
Stantec Consulting Corp.
15575 Los Gatos Blvd
Bldg. C
Los Gatos, California 95032

Attn: Ms. Alicia Falk

Authorized for release by:
8/28/2012 3:26:16 PM

Afsaneh Salimpour
Project Manager I
afsaneh.salimpour@testamericainc.com

Table of Contents

Client: Stantec Consulting Corp.
Project/Site: Goodyear DEX#9578,3430 Castro Valley

TestAmerica Job ID: 720-44090-1

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
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 720-44090-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-44090-1

Comments
No additional comments.

Receipt
The samples were received on 8/21/2012 4:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 3.5º C.

Metals

No other analytical or quality issues were noted.

Detection Summary

Client: Stantec Consulting Corp.
Project/Site: Goodyear DEX#9578,3430 Castro Valley

TestAmerica Job ID: 720-44090-1

Client Sample ID: COMP-2

Lab Sample ID: 720-44090-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	35		1.9		mg/Kg	4		6010B	Total/NA
Nickel	36		1.9		mg/Kg	4		6010B	Total/NA
Lead	480		1.9		mg/Kg	4		6010B	Total/NA
Zinc	100		5.7		mg/Kg	4		6010B	Total/NA

Client: Stantec Consulting Corp.
Project/Site: Goodyear DEX#9578,3430 Castro Valley

TestAmerica Job ID: 720-44090-1

Method: 6010B - Metals (ICP)

Client Sample ID: COMP-2
Date Collected: 08/20/12 19:22
Date Received: 08/21/12 16:20

Lab Sample ID: 720-44090-3
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.48		mg/Kg		08/22/12 18:56	08/23/12 13:46	4
Chromium	**35**		1.9		mg/Kg		08/22/12 18:56	08/23/12 13:46	4
Nickel	**36**		1.9		mg/Kg		08/22/12 18:56	08/23/12 13:46	4
Lead	**480**		1.9		mg/Kg		08/22/12 18:56	08/23/12 13:46	4
Zinc	**100**		5.7		mg/Kg		08/22/12 18:56	08/23/12 13:46	4

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 720-119606/1-A
Matrix: Solid
Analysis Batch: 119659

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 119606

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.13		mg/Kg		08/22/12 18:56	08/23/12 12:49	1
Chromium	ND		0.50		mg/Kg		08/22/12 18:56	08/23/12 12:49	1
Nickel	ND		0.50		mg/Kg		08/22/12 18:56	08/23/12 12:49	1
Lead	ND		0.50		mg/Kg		08/22/12 18:56	08/23/12 12:49	1
Zinc	ND		1.5		mg/Kg		08/22/12 18:56	08/23/12 12:49	1

Lab Sample ID: LCS 720-119606/2-A
Matrix: Solid
Analysis Batch: 119659

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 119606

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cadmium			50.0	48.6		mg/Kg		97	80 - 120		
Chromium			50.0	53.0		mg/Kg		106	80 - 120		
Nickel			50.0	54.1		mg/Kg		108	80 - 120		
Lead			50.0	52.0		mg/Kg		104	80 - 120		
Zinc			50.0	50.1		mg/Kg		100	80 - 120		

Lab Sample ID: LCSD 720-119606/3-A
Matrix: Solid
Analysis Batch: 119659

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 119606

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium			50.0	49.2		mg/Kg		98	80 - 120	1	20
Chromium			50.0	53.0		mg/Kg		106	80 - 120	0	20
Nickel			50.0	54.3		mg/Kg		109	80 - 120	0	20
Lead			50.0	52.4		mg/Kg		105	80 - 120	1	20
Zinc			50.0	50.5		mg/Kg		101	80 - 120	1	20

Lab Sample ID: LCSSRM 720-119606/20-A
Matrix: Solid
Analysis Batch: 119659

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 119606

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits		
Cadmium			42.0	38.2		mg/Kg		91	67 - 118		
Chromium			269	266		mg/Kg		99	67 - 121		
Nickel			106	106		mg/Kg		100	65 - 117		
Lead			280	268		mg/Kg		96	62 - 113		
Zinc			574	531		mg/Kg		92	62 - 110		

QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: Goodyear DEX#9578,3430 Castro Valley

TestAmerica Job ID: 720-44090-1

Metals

Prep Batch: 119606

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-44090-3	COMP-2	Total/NA	Solid	3050B	
LCS 720-119606/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 720-119606/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
LCSSRM 720-119606/20-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 720-119606/1-A	Method Blank	Total/NA	Solid	3050B	

Analysis Batch: 119659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-44090-3	COMP-2	Total/NA	Solid	6010B	119606
LCS 720-119606/2-A	Lab Control Sample	Total/NA	Solid	6010B	119606
LCSD 720-119606/3-A	Lab Control Sample Dup	Total/NA	Solid	6010B	119606
LCSSRM 720-119606/20-A	Lab Control Sample	Total/NA	Solid	6010B	119606
MB 720-119606/1-A	Method Blank	Total/NA	Solid	6010B	119606

Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: Goodyear DEX#9578,3430 Castro Valley

TestAmerica Job ID: 720-44090-1

Client Sample ID: COMP-2
Date Collected: 08/20/12 19:22
Date Received: 08/21/12 16:20

Lab Sample ID: 720-44090-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			119606	08/22/12 18:56	CDT	TAL SF
Total/NA	Analysis	6010B		4	119659	08/23/12 13:46	CAM	TAL SF

Laboratory References:

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

Certification Summary

Client: Stantec Consulting Corp.
Project/Site: Goodyear DEX#9578,3430 Castro Valley

TestAmerica Job ID: 720-44090-1

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	01-31-14

Method Summary

Client: Stantec Consulting Corp.
Project/Site: Goodyear DEX#9578,3430 Castro Valley

TestAmerica Job ID: 720-44090-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL SF

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: Stantec Consulting Corp.
Project/Site: Goodyear DEX#9578,3430 Castro Valley

TestAmerica Job ID: 720-44090-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-44090-3	COMP-2	Solid	08/20/12 19:22	08/21/12 16:20

CHAIN OF CUSTODY RECORD

JDE NO. 3862

720 44090

140302

8/28/2012

GOODYEAR

TestAmerica
1220 Quarry Lane
Pleasanton, CA 94566

Phone: 925.484.1919

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
State in which sampling occurred _____
Compliance Monitoring? Yes No
Enforcement Action? Yes No

Client Name: Stantec
Address: 15575 Los Gatos Boulevard, Building C
City/State/Zip: Los Gatos, CA 95032
Project Manager: Gary Messerotes email: gary.messerotes@stantec.com
Telephone Number: 408-356-6124 ext 252 Fax No.: 408-356-6138
Sampler Name: (Print) Alicia Jansen
Sampler Signature:
PO & Quote Number: Goodyear PO No. C4121 Quote No. Posted on TestAmerica Oasis 12-17-08

Report To: Alicia Falk
Invoice To: Karen Burlingame Goodyear Dept. 110F 1144 E.Market St. Akron, OH 44136-0001
Invoice email: karen.burlingame@goodyear.com
Territory ID: Former Goodyear DEX# 9578, 3430 Castro Valley Boulevard, Castro Valley, CA
Project No & ID: 185702561

Sample ID	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Preservative: HNO_3 (Red Label)	Preservative: HCl (Blue Label)	Preservative: NaOH (Orange Label)	Preservative: H_2SO_4 Plastic (Yellow Label)	Preservative: H_2SO_4 Glass(Yellow Label)	Preservative: None (Black Label)	Preservative: Other (Specify)	Matrix: Groundwater	Matrix: Soil	Matrix: Other (specify)	Analyze For: 8015 - TPH-DRO (C10 to C28)	8015B - TPH-GRO	9071B - TRPH	8260B - BTEX, MTBE, EDC, and EDB	8270C - SVOCs	6010B - Lead	8015 - TPH-DRO (C10 to C28) with Silica Gel Cleanup	Analyze For: LUFT 5 metals	RUSH TAT (Pre-Schedule)	RUSH Due Date	Standard TAT7-10 Business Day	Fax Results	TestAmerica QC Level 2	Electronic Deliverables	REMARKS
COMP-2	8/20/12	1922	2		X							X			X									X			X			X	EDF Required

Special Instructions:
A copy of the chain of custody must accompany each invoice to Goodyear for payment !!!
Detection limits (in ug/l) for TPH-DRO/ORO must not exceed 100 ug/l.

EDF REQUIRED GLOBAL ID = T0600101801 SEND ANALYTICAL REPORTS TO alicia.falk@stantec.com

Laboratory Comments:
Temperature Upon Receipt: 3.5°C
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N

** Level 4 Deliverables is a Full CLP like data package there is a **surcharge** on all Level 4 data packages.

Relinquished by:	Date	Time	Received by:	Date	Time
	8/21/12	1435	(TASP)	08/21/12	1435
Relinquished by:	Date	Time	Received by TestAmerica:	Date	Time
	08/21/12	1620		8-21-12	1620

Login Sample Receipt Checklist

Client: Stantec Consulting Corp.

Job Number: 720-44090-1

Login Number: 44090

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Apostol, Anita

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
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: 720-57584-1
Client Project/Site: Goodyear -DEX ID No.9578 Castro Valley

For:
Stantec Consulting Corp.
15575 Los Gatos Blvd
Bldg. C
Los Gatos, California 95032

Attn: Mr. Gary Messerotes

Authorized for release by:
5/27/2014 12:13:35 PM

Afsaneh Salimpour, Senior Project Manager
(925)484-1919
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Table of Contents

Client: Stantec Consulting Corp.
Project/Site: Goodyear -DEX ID No.9578 Castro Valley

TestAmerica Job ID: 720-57584-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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
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: Stantec Consulting Corp.
Project/Site: Goodyear -DEX ID No.9578 Castro Valley

TestAmerica Job ID: 720-57584-1

Job ID: 720-57584-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-57584-1

Comments
No additional comments.

Receipt
The samples were received on 5/21/2014 4:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 7.1° C.

GC/MS VOA
Method(s) 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 159870 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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 (Nitrobenzene-d5) for the following sample(s) was outside the upper control limit: MW-4 (720-57584-1), MW-5 (720-57584-2). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8270C: Surrogat (nitrobenzene-d5) recovery outside of QC control limit.

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: Stantec Consulting Corp.
Project/Site: Goodyear -DEX ID No.9578 Castro Valley

TestAmerica Job ID: 720-57584-1

Client Sample ID: MW-4 **Lab Sample ID: 720-57584-1**

No Detections.

Client Sample ID: MW-5 **Lab Sample ID: 720-57584-2**

No Detections.

This Detection Summary does not include radiochemical test results.

Client: Stantec Consulting Corp.
Project/Site: Goodyear -DEX ID No.9578 Castro Valley

TestAmerica Job ID: 720-57584-1

Client Sample ID: MW-4
Date Collected: 05/21/14 15:10
Date Received: 05/21/14 16:50

Lab Sample ID: 720-57584-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			05/22/14 17:33	1
Acetone	ND		50		ug/L			05/22/14 17:33	1
Benzene	ND		0.50		ug/L			05/22/14 17:33	1
Dichlorobromomethane	ND		0.50		ug/L			05/22/14 17:33	1
Bromobenzene	ND		1.0		ug/L			05/22/14 17:33	1
Chlorobromomethane	ND		1.0		ug/L			05/22/14 17:33	1
Bromoform	ND		1.0		ug/L			05/22/14 17:33	1
Bromomethane	ND		1.0		ug/L			05/22/14 17:33	1
2-Butanone (MEK)	ND		50		ug/L			05/22/14 17:33	1
n-Butylbenzene	ND		1.0		ug/L			05/22/14 17:33	1
sec-Butylbenzene	ND		1.0		ug/L			05/22/14 17:33	1
tert-Butylbenzene	ND		1.0		ug/L			05/22/14 17:33	1
Carbon disulfide	ND		5.0		ug/L			05/22/14 17:33	1
Carbon tetrachloride	ND		0.50		ug/L			05/22/14 17:33	1
Chlorobenzene	ND		0.50		ug/L			05/22/14 17:33	1
Chloroethane	ND		1.0		ug/L			05/22/14 17:33	1
Chloroform	ND		1.0		ug/L			05/22/14 17:33	1
Chloromethane	ND		1.0		ug/L			05/22/14 17:33	1
2-Chlorotoluene	ND		0.50		ug/L			05/22/14 17:33	1
4-Chlorotoluene	ND		0.50		ug/L			05/22/14 17:33	1
Chlorodibromomethane	ND		0.50		ug/L			05/22/14 17:33	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/22/14 17:33	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/22/14 17:33	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/22/14 17:33	1
1,3-Dichloropropane	ND		1.0		ug/L			05/22/14 17:33	1
1,1-Dichloropropene	ND		0.50		ug/L			05/22/14 17:33	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/22/14 17:33	1
Ethylene Dibromide	ND		0.50		ug/L			05/22/14 17:33	1
Dibromomethane	ND		0.50		ug/L			05/22/14 17:33	1
Dichlorodifluoromethane	ND		0.50		ug/L			05/22/14 17:33	1
1,1-Dichloroethane	ND		0.50		ug/L			05/22/14 17:33	1
1,2-Dichloroethane	ND		0.50		ug/L			05/22/14 17:33	1
1,1-Dichloroethene	ND		0.50		ug/L			05/22/14 17:33	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/22/14 17:33	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/22/14 17:33	1
1,2-Dichloropropane	ND		0.50		ug/L			05/22/14 17:33	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/22/14 17:33	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/22/14 17:33	1
Ethylbenzene	ND		0.50		ug/L			05/22/14 17:33	1
Hexachlorobutadiene	ND		1.0		ug/L			05/22/14 17:33	1
2-Hexanone	ND		50		ug/L			05/22/14 17:33	1
Isopropylbenzene	ND		0.50		ug/L			05/22/14 17:33	1
4-Isopropyltoluene	ND		1.0		ug/L			05/22/14 17:33	1
Methylene Chloride	ND		5.0		ug/L			05/22/14 17:33	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			05/22/14 17:33	1
Naphthalene	ND		1.0		ug/L			05/23/14 11:24	1
N-Propylbenzene	ND		1.0		ug/L			05/22/14 17:33	1
Styrene	ND		0.50		ug/L			05/22/14 17:33	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/22/14 17:33	1

Client: Stantec Consulting Corp.
Project/Site: Goodyear -DEX ID No.9578 Castro Valley

TestAmerica Job ID: 720-57584-1

Client Sample ID: MW-4
Date Collected: 05/21/14 15:10
Date Received: 05/21/14 16:50

Lab Sample ID: 720-57584-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/22/14 17:33	1
Tetrachloroethene	ND		0.50		ug/L			05/22/14 17:33	1
Toluene	ND		0.50		ug/L			05/22/14 17:33	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			05/22/14 17:33	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			05/22/14 17:33	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/22/14 17:33	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/22/14 17:33	1
Trichloroethene	ND		0.50		ug/L			05/22/14 17:33	1
Trichlorofluoromethane	ND		1.0		ug/L			05/22/14 17:33	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/22/14 17:33	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/22/14 17:33	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/22/14 17:33	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/22/14 17:33	1
Vinyl acetate	ND		10		ug/L			05/22/14 17:33	1
Vinyl chloride	ND		0.50		ug/L			05/22/14 17:33	1
Xylenes, Total	ND		1.0		ug/L			05/22/14 17:33	1
2,2-Dichloropropane	ND		0.50		ug/L			05/22/14 17:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*67 - 130*		*05/22/14 17:33*	*1*
4-Bromofluorobenzene	*95*		*67 - 130*		*05/23/14 11:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*72 - 130*		*05/22/14 17:33*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*72 - 130*		*05/23/14 11:24*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*05/22/14 17:33*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*05/23/14 11:24*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
Bis(2-chloroethyl)ether	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
2-Chlorophenol	ND		3.8		ug/L		05/22/14 13:13	05/22/14 18:16	1
1,3-Dichlorobenzene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
1,4-Dichlorobenzene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
Benzyl alcohol	ND		4.7		ug/L		05/22/14 13:13	05/22/14 18:16	1
1,2-Dichlorobenzene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
2-Methylphenol	ND		3.8		ug/L		05/22/14 13:13	05/22/14 18:16	1
4-Methylphenol	ND		7.6		ug/L		05/22/14 13:13	05/22/14 18:16	1
N-Nitrosodi-n-propylamine	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
Hexachloroethane	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
Nitrobenzene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
Isophorone	ND		3.8		ug/L		05/22/14 13:13	05/22/14 18:16	1
2-Nitrophenol	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
2,4-Dimethylphenol	ND		2.8		ug/L		05/22/14 13:13	05/22/14 18:16	1
Bis(2-chloroethoxy)methane	ND		4.7		ug/L		05/22/14 13:13	05/22/14 18:16	1
2,4-Dichlorophenol	ND		4.7		ug/L		05/22/14 13:13	05/22/14 18:16	1
1,2,4-Trichlorobenzene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
Naphthalene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
4-Chloroaniline	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
Hexachlorobutadiene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
4-Chloro-3-methylphenol	ND		4.7		ug/L		05/22/14 13:13	05/22/14 18:16	1

Client: Stantec Consulting Corp.
Project/Site: Goodyear -DEX ID No.9578 Castro Valley

TestAmerica Job ID: 720-57584-1

Client Sample ID: MW-4
Date Collected: 05/21/14 15:10
Date Received: 05/21/14 16:50

Lab Sample ID: 720-57584-1
Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
Hexachlorocyclopentadiene	ND		4.7		ug/L		05/22/14 13:13	05/22/14 18:16	1
2,4,6-Trichlorophenol	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
2,4,5-Trichlorophenol	ND		3.8		ug/L		05/22/14 13:13	05/22/14 18:16	1
2-Chloronaphthalene	ND		3.8		ug/L		05/22/14 13:13	05/22/14 18:16	1
2-Nitroaniline	ND		9.5		ug/L		05/22/14 13:13	05/22/14 18:16	1
Dimethyl phthalate	ND		4.7		ug/L		05/22/14 13:13	05/22/14 18:16	1
Acenaphthylene	ND		3.8		ug/L		05/22/14 13:13	05/22/14 18:16	1
3-Nitroaniline	ND		4.7		ug/L		05/22/14 13:13	05/22/14 18:16	1
Acenaphthene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
2,4-Dinitrophenol	ND		9.5		ug/L		05/22/14 13:13	05/22/14 18:16	1
4-Nitrophenol	ND		9.5		ug/L		05/22/14 13:13	05/22/14 18:16	1
Dibenzofuran	ND		3.8		ug/L		05/22/14 13:13	05/22/14 18:16	1
2,4-Dinitrotoluene	ND		3.8		ug/L		05/22/14 13:13	05/22/14 18:16	1
2,6-Dinitrotoluene	ND		4.7		ug/L		05/22/14 13:13	05/22/14 18:16	1
Diethyl phthalate	ND		4.7		ug/L		05/22/14 13:13	05/22/14 18:16	1
4-Chlorophenyl phenyl ether	ND		4.7		ug/L		05/22/14 13:13	05/22/14 18:16	1
Fluorene	ND		3.8		ug/L		05/22/14 13:13	05/22/14 18:16	1
4-Nitroaniline	ND		9.5		ug/L		05/22/14 13:13	05/22/14 18:16	1
2-Methyl-4,6-dinitrophenol	ND		9.5		ug/L		05/22/14 13:13	05/22/14 18:16	1
N-Nitrosodiphenylamine	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
4-Bromophenyl phenyl ether	ND		4.7		ug/L		05/22/14 13:13	05/22/14 18:16	1
Hexachlorobenzene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
Pentachlorophenol	ND		9.5		ug/L		05/22/14 13:13	05/22/14 18:16	1
Phenanthrene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
Anthracene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
Di-n-butyl phthalate	ND		4.7		ug/L		05/22/14 13:13	05/22/14 18:16	1
Fluoranthene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
Pyrene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
Butyl benzyl phthalate	ND		4.7		ug/L		05/22/14 13:13	05/22/14 18:16	1
3,3'-Dichlorobenzidine	ND		4.7		ug/L		05/22/14 13:13	05/22/14 18:16	1
Benzo[a]anthracene	ND		4.7		ug/L		05/22/14 13:13	05/22/14 18:16	1
Bis(2-ethylhexyl) phthalate	ND		9.5		ug/L		05/22/14 13:13	05/22/14 18:16	1
Chrysene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
Di-n-octyl phthalate	ND		4.7		ug/L		05/22/14 13:13	05/22/14 18:16	1
Benzo[b]fluoranthene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
Benzo[a]pyrene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
Benzo[k]fluoranthene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
Indeno[1,2,3-cd]pyrene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
Benzo[g,h,i]perylene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
Benzoic acid	ND		9.5		ug/L		05/22/14 13:13	05/22/14 18:16	1
Azobenzene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1
Dibenz(a,h)anthracene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*81*	*X*	*16 - 72*	*05/22/14 13:13*	*05/22/14 18:16*	*1*
2-Fluorobiphenyl	*81*		*10 - 101*	*05/22/14 13:13*	*05/22/14 18:16*	*1*
Terphenyl-d14	*84*		*42 - 112*	*05/22/14 13:13*	*05/22/14 18:16*	*1*
2-Fluorophenol	*30*		*10 - 65*	*05/22/14 13:13*	*05/22/14 18:16*	*1*
Phenol-d5	*22*		*10 - 46*	*05/22/14 13:13*	*05/22/14 18:16*	*1*

Client: Stantec Consulting Corp.
Project/Site: Goodyear -DEX ID No.9578 Castro Valley

TestAmerica Job ID: 720-57584-1

Client Sample ID: MW-4
Date Collected: 05/21/14 15:10
Date Received: 05/21/14 16:50

Lab Sample ID: 720-57584-1
Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	*89*		*17 - 100*	*05/22/14 13:13*	*05/22/14 18:16*	*1*

Client: Stantec Consulting Corp.
Project/Site: Goodyear -DEX ID No.9578 Castro Valley

TestAmerica Job ID: 720-57584-1

Client Sample ID: MW-5
Date Collected: 05/21/14 14:00
Date Received: 05/21/14 16:50

Lab Sample ID: 720-57584-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			05/22/14 18:00	1
Acetone	ND		50		ug/L			05/22/14 18:00	1
Benzene	ND		0.50		ug/L			05/22/14 18:00	1
Dichlorobromomethane	ND		0.50		ug/L			05/22/14 18:00	1
Bromobenzene	ND		1.0		ug/L			05/22/14 18:00	1
Chlorobromomethane	ND		1.0		ug/L			05/22/14 18:00	1
Bromoform	ND		1.0		ug/L			05/22/14 18:00	1
Bromomethane	ND		1.0		ug/L			05/22/14 18:00	1
2-Butanone (MEK)	ND		50		ug/L			05/22/14 18:00	1
n-Butylbenzene	ND		1.0		ug/L			05/22/14 18:00	1
sec-Butylbenzene	ND		1.0		ug/L			05/22/14 18:00	1
tert-Butylbenzene	ND		1.0		ug/L			05/22/14 18:00	1
Carbon disulfide	ND		5.0		ug/L			05/22/14 18:00	1
Carbon tetrachloride	ND		0.50		ug/L			05/22/14 18:00	1
Chlorobenzene	ND		0.50		ug/L			05/22/14 18:00	1
Chloroethane	ND		1.0		ug/L			05/22/14 18:00	1
Chloroform	ND		1.0		ug/L			05/22/14 18:00	1
Chloromethane	ND		1.0		ug/L			05/22/14 18:00	1
2-Chlorotoluene	ND		0.50		ug/L			05/22/14 18:00	1
4-Chlorotoluene	ND		0.50		ug/L			05/22/14 18:00	1
Chlorodibromomethane	ND		0.50		ug/L			05/22/14 18:00	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/22/14 18:00	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/22/14 18:00	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/22/14 18:00	1
1,3-Dichloropropane	ND		1.0		ug/L			05/22/14 18:00	1
1,1-Dichloropropene	ND		0.50		ug/L			05/22/14 18:00	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/22/14 18:00	1
Ethylene Dibromide	ND		0.50		ug/L			05/22/14 18:00	1
Dibromomethane	ND		0.50		ug/L			05/22/14 18:00	1
Dichlorodifluoromethane	ND		0.50		ug/L			05/22/14 18:00	1
1,1-Dichloroethane	ND		0.50		ug/L			05/22/14 18:00	1
1,2-Dichloroethane	ND		0.50		ug/L			05/22/14 18:00	1
1,1-Dichloroethene	ND		0.50		ug/L			05/22/14 18:00	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/22/14 18:00	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/22/14 18:00	1
1,2-Dichloropropane	ND		0.50		ug/L			05/22/14 18:00	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/22/14 18:00	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/22/14 18:00	1
Ethylbenzene	ND		0.50		ug/L			05/22/14 18:00	1
Hexachlorobutadiene	ND		1.0		ug/L			05/22/14 18:00	1
2-Hexanone	ND		50		ug/L			05/22/14 18:00	1
Isopropylbenzene	ND		0.50		ug/L			05/22/14 18:00	1
4-Isopropyltoluene	ND		1.0		ug/L			05/22/14 18:00	1
Methylene Chloride	ND		5.0		ug/L			05/22/14 18:00	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			05/22/14 18:00	1
Naphthalene	ND		1.0		ug/L			05/22/14 18:00	1
N-Propylbenzene	ND		1.0		ug/L			05/22/14 18:00	1
Styrene	ND		0.50		ug/L			05/22/14 18:00	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/22/14 18:00	1

Client Sample ID: MW-5
Date Collected: 05/21/14 14:00
Date Received: 05/21/14 16:50

Lab Sample ID: 720-57584-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/22/14 18:00	1
Tetrachloroethene	ND		0.50		ug/L			05/22/14 18:00	1
Toluene	ND		0.50		ug/L			05/22/14 18:00	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			05/22/14 18:00	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			05/22/14 18:00	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/22/14 18:00	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/22/14 18:00	1
Trichloroethene	ND		0.50		ug/L			05/22/14 18:00	1
Trichlorofluoromethane	ND		1.0		ug/L			05/22/14 18:00	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/22/14 18:00	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/22/14 18:00	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/22/14 18:00	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/22/14 18:00	1
Vinyl acetate	ND		10		ug/L			05/22/14 18:00	1
Vinyl chloride	ND		0.50		ug/L			05/22/14 18:00	1
Xylenes, Total	ND		1.0		ug/L			05/22/14 18:00	1
2,2-Dichloropropane	ND		0.50		ug/L			05/22/14 18:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*67 - 130*		*05/22/14 18:00*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*72 - 130*		*05/22/14 18:00*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*05/22/14 18:00*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
Bis(2-chloroethyl)ether	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
2-Chlorophenol	ND		3.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
1,3-Dichlorobenzene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
1,4-Dichlorobenzene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
Benzyl alcohol	ND		4.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
1,2-Dichlorobenzene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
2-Methylphenol	ND		3.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
4-Methylphenol	ND		7.7		ug/L		05/22/14 13:13	05/22/14 18:40	1
N-Nitrosodi-n-propylamine	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
Hexachloroethane	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
Nitrobenzene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
Isophorone	ND		3.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
2-Nitrophenol	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
2,4-Dimethylphenol	ND		2.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
Bis(2-chloroethoxy)methane	ND		4.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
2,4-Dichlorophenol	ND		4.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
1,2,4-Trichlorobenzene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
Naphthalene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
4-Chloroaniline	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
Hexachlorobutadiene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
4-Chloro-3-methylphenol	ND		4.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
2-Methylnaphthalene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
Hexachlorocyclopentadiene	ND		4.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
2,4,6-Trichlorophenol	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1

Client: Stantec Consulting Corp.
Project/Site: Goodyear -DEX ID No.9578 Castro Valley

TestAmerica Job ID: 720-57584-1

Client Sample ID: MW-5
Date Collected: 05/21/14 14:00
Date Received: 05/21/14 16:50

Lab Sample ID: 720-57584-2
Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		3.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
2-Chloronaphthalene	ND		3.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
2-Nitroaniline	ND		9.6		ug/L		05/22/14 13:13	05/22/14 18:40	1
Dimethyl phthalate	ND		4.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
Acenaphthylene	ND		3.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
3-Nitroaniline	ND		4.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
Acenaphthene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
2,4-Dinitrophenol	ND		9.6		ug/L		05/22/14 13:13	05/22/14 18:40	1
4-Nitrophenol	ND		9.6		ug/L		05/22/14 13:13	05/22/14 18:40	1
Dibenzofuran	ND		3.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
2,4-Dinitrotoluene	ND		3.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
2,6-Dinitrotoluene	ND		4.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
Diethyl phthalate	ND		4.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
4-Chlorophenyl phenyl ether	ND		4.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
Fluorene	ND		3.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
4-Nitroaniline	ND		9.6		ug/L		05/22/14 13:13	05/22/14 18:40	1
2-Methyl-4,6-dinitrophenol	ND		9.6		ug/L		05/22/14 13:13	05/22/14 18:40	1
N-Nitrosodiphenylamine	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
4-Bromophenyl phenyl ether	ND		4.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
Hexachlorobenzene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
Pentachlorophenol	ND		9.6		ug/L		05/22/14 13:13	05/22/14 18:40	1
Phenanthrene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
Anthracene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
Di-n-butyl phthalate	ND		4.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
Fluoranthene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
Pyrene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
Butyl benzyl phthalate	ND		4.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
3,3'-Dichlorobenzidine	ND		4.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
Benzo[a]anthracene	ND		4.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
Bis(2-ethylhexyl) phthalate	ND		9.6		ug/L		05/22/14 13:13	05/22/14 18:40	1
Chrysene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
Di-n-octyl phthalate	ND		4.8		ug/L		05/22/14 13:13	05/22/14 18:40	1
Benzo[b]fluoranthene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
Benzo[a]pyrene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
Benzo[k]fluoranthene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
Indeno[1,2,3-cd]pyrene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
Benzo[g,h,i]perylene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
Benzoic acid	ND		9.6		ug/L		05/22/14 13:13	05/22/14 18:40	1
Azobenzene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1
Dibenz(a,h)anthracene	ND		1.9		ug/L		05/22/14 13:13	05/22/14 18:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*89*	*X*	*16 - 72*	*05/22/14 13:13*	*05/22/14 18:40*	*1*
2-Fluorobiphenyl	*90*		*10 - 101*	*05/22/14 13:13*	*05/22/14 18:40*	*1*
Terphenyl-d14	*98*		*42 - 112*	*05/22/14 13:13*	*05/22/14 18:40*	*1*
2-Fluorophenol	*34*		*10 - 65*	*05/22/14 13:13*	*05/22/14 18:40*	*1*
Phenol-d5	*23*		*10 - 46*	*05/22/14 13:13*	*05/22/14 18:40*	*1*
2,4,6-Tribromophenol	*95*		*17 - 100*	*05/22/14 13:13*	*05/22/14 18:40*	*1*

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

Lab Sample ID: MB 720-159870/4
Matrix: Water
Analysis Batch: 159870

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			05/22/14 08:53	1
Acetone	ND		50		ug/L			05/22/14 08:53	1
Benzene	ND		0.50		ug/L			05/22/14 08:53	1
Dichlorobromomethane	ND		0.50		ug/L			05/22/14 08:53	1
Bromobenzene	ND		1.0		ug/L			05/22/14 08:53	1
Chlorobromomethane	ND		1.0		ug/L			05/22/14 08:53	1
Bromoform	ND		1.0		ug/L			05/22/14 08:53	1
Bromomethane	ND		1.0		ug/L			05/22/14 08:53	1
2-Butanone (MEK)	ND		50		ug/L			05/22/14 08:53	1
n-Butylbenzene	ND		1.0		ug/L			05/22/14 08:53	1
sec-Butylbenzene	ND		1.0		ug/L			05/22/14 08:53	1
tert-Butylbenzene	ND		1.0		ug/L			05/22/14 08:53	1
Carbon disulfide	ND		5.0		ug/L			05/22/14 08:53	1
Carbon tetrachloride	ND		0.50		ug/L			05/22/14 08:53	1
Chlorobenzene	ND		0.50		ug/L			05/22/14 08:53	1
Chloroethane	ND		1.0		ug/L			05/22/14 08:53	1
Chloroform	ND		1.0		ug/L			05/22/14 08:53	1
Chloromethane	ND		1.0		ug/L			05/22/14 08:53	1
2-Chlorotoluene	ND		0.50		ug/L			05/22/14 08:53	1
4-Chlorotoluene	ND		0.50		ug/L			05/22/14 08:53	1
Chlorodibromomethane	ND		0.50		ug/L			05/22/14 08:53	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/22/14 08:53	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/22/14 08:53	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/22/14 08:53	1
1,3-Dichloropropane	ND		1.0		ug/L			05/22/14 08:53	1
1,1-Dichloropropene	ND		0.50		ug/L			05/22/14 08:53	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/22/14 08:53	1
Ethylene Dibromide	ND		0.50		ug/L			05/22/14 08:53	1
Dibromomethane	ND		0.50		ug/L			05/22/14 08:53	1
Dichlorodifluoromethane	ND		0.50		ug/L			05/22/14 08:53	1
1,1-Dichloroethane	ND		0.50		ug/L			05/22/14 08:53	1
1,2-Dichloroethane	ND		0.50		ug/L			05/22/14 08:53	1
1,1-Dichloroethene	ND		0.50		ug/L			05/22/14 08:53	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/22/14 08:53	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/22/14 08:53	1
1,2-Dichloropropane	ND		0.50		ug/L			05/22/14 08:53	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/22/14 08:53	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/22/14 08:53	1
Ethylbenzene	ND		0.50		ug/L			05/22/14 08:53	1
Hexachlorobutadiene	ND		1.0		ug/L			05/22/14 08:53	1
2-Hexanone	ND		50		ug/L			05/22/14 08:53	1
Isopropylbenzene	ND		0.50		ug/L			05/22/14 08:53	1
4-Isopropyltoluene	ND		1.0		ug/L			05/22/14 08:53	1
Methylene Chloride	ND		5.0		ug/L			05/22/14 08:53	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			05/22/14 08:53	1
Naphthalene	ND		1.0		ug/L			05/22/14 08:53	1
N-Propylbenzene	ND		1.0		ug/L			05/22/14 08:53	1
Styrene	ND		0.50		ug/L			05/22/14 08:53	1

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

Lab Sample ID: MB 720-159870/4
Matrix: Water
Analysis Batch: 159870

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/22/14 08:53	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/22/14 08:53	1
Tetrachloroethene	ND		0.50		ug/L			05/22/14 08:53	1
Toluene	ND		0.50		ug/L			05/22/14 08:53	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			05/22/14 08:53	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			05/22/14 08:53	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/22/14 08:53	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/22/14 08:53	1
Trichloroethene	ND		0.50		ug/L			05/22/14 08:53	1
Trichlorofluoromethane	ND		1.0		ug/L			05/22/14 08:53	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/22/14 08:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/22/14 08:53	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/22/14 08:53	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/22/14 08:53	1
Vinyl acetate	ND		10		ug/L			05/22/14 08:53	1
Vinyl chloride	ND		0.50		ug/L			05/22/14 08:53	1
Xylenes, Total	ND		1.0		ug/L			05/22/14 08:53	1
2,2-Dichloropropane	ND		0.50		ug/L			05/22/14 08:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*67 - 130*		*05/22/14 08:53*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*72 - 130*		*05/22/14 08:53*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*05/22/14 08:53*	*1*

Lab Sample ID: LCS 720-159870/5
Matrix: Water
Analysis Batch: 159870

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	25.0	25.3		ug/L		101	62 - 130
Acetone	125	118		ug/L		94	26 - 180
Benzene	25.0	26.2		ug/L		105	79 - 130
Dichlorobromomethane	25.0	26.4		ug/L		105	70 - 130
Bromobenzene	25.0	26.0		ug/L		104	70 - 130
Chlorobromomethane	25.0	26.2		ug/L		105	70 - 130
Bromoform	25.0	25.8		ug/L		103	68 - 136
Bromomethane	25.0	24.3		ug/L		97	43 - 151
2-Butanone (MEK)	125	114		ug/L		91	54 - 130
n-Butylbenzene	25.0	26.0		ug/L		104	70 - 142
sec-Butylbenzene	25.0	25.1		ug/L		100	70 - 134
tert-Butylbenzene	25.0	25.4		ug/L		102	70 - 135
Carbon disulfide	25.0	23.4		ug/L		93	58 - 130
Carbon tetrachloride	25.0	26.1		ug/L		104	70 - 146
Chlorobenzene	25.0	26.2		ug/L		105	70 - 130
Chloroethane	25.0	23.0		ug/L		92	62 - 138
Chloroform	25.0	25.9		ug/L		103	70 - 130
Chloromethane	25.0	20.4		ug/L		82	52 - 175
2-Chlorotoluene	25.0	24.9		ug/L		100	70 - 130

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

Lab Sample ID: LCS 720-159870/5
Matrix: Water
Analysis Batch: 159870

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Chlorotoluene	25.0	25.5		ug/L		102	70 - 130
Chlorodibromomethane	25.0	28.6		ug/L		114	70 - 145
1,2-Dichlorobenzene	25.0	26.2		ug/L		105	70 - 130
1,3-Dichlorobenzene	25.0	26.2		ug/L		105	70 - 130
1,4-Dichlorobenzene	25.0	26.5		ug/L		106	70 - 130
1,3-Dichloropropane	25.0	26.3		ug/L		105	70 - 130
1,1-Dichloropropene	25.0	27.2		ug/L		109	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	24.9		ug/L		99	70 - 136
Ethylene Dibromide	25.0	27.4		ug/L		109	70 - 130
Dibromomethane	25.0	26.0		ug/L		104	70 - 130
Dichlorodifluoromethane	25.0	19.9		ug/L		79	34 - 132
1,1-Dichloroethane	25.0	25.7		ug/L		103	70 - 130
1,2-Dichloroethane	25.0	24.3		ug/L		97	61 - 132
1,1-Dichloroethene	25.0	23.3		ug/L		93	64 - 128
cis-1,2-Dichloroethene	25.0	24.7		ug/L		99	70 - 130
trans-1,2-Dichloroethene	25.0	26.4		ug/L		106	68 - 130
1,2-Dichloropropane	25.0	26.2		ug/L		105	70 - 130
cis-1,3-Dichloropropene	25.0	29.3		ug/L		117	70 - 130
trans-1,3-Dichloropropene	25.0	31.1		ug/L		124	70 - 140
Ethylbenzene	25.0	25.2		ug/L		101	80 - 120
Hexachlorobutadiene	25.0	27.5		ug/L		110	70 - 130
2-Hexanone	125	104		ug/L		83	60 - 164
Isopropylbenzene	25.0	25.7		ug/L		103	70 - 130
4-Isopropyltoluene	25.0	25.5		ug/L		102	70 - 130
Methylene Chloride	25.0	25.8		ug/L		103	70 - 147
4-Methyl-2-pentanone (MIBK)	125	108		ug/L		87	58 - 130
Naphthalene	25.0	27.0		ug/L		108	70 - 130
N-Propylbenzene	25.0	25.2		ug/L		101	70 - 130
Styrene	25.0	27.4		ug/L		110	70 - 130
1,1,1,2-Tetrachloroethane	25.0	27.0		ug/L		108	70 - 130
1,1,2,2-Tetrachloroethane	25.0	23.9		ug/L		96	70 - 130
Tetrachloroethene	25.0	27.9		ug/L		112	70 - 130
Toluene	25.0	25.3		ug/L		101	78 - 120
1,2,3-Trichlorobenzene	25.0	28.8		ug/L		115	70 - 130
1,2,4-Trichlorobenzene	25.0	28.9		ug/L		116	70 - 130
1,1,1-Trichloroethane	25.0	25.1		ug/L		100	70 - 130
1,1,2-Trichloroethane	25.0	26.7		ug/L		107	70 - 130
Trichloroethene	25.0	27.4		ug/L		110	70 - 130
Trichlorofluoromethane	25.0	24.5		ug/L		98	66 - 132
1,2,3-Trichloropropane	25.0	24.0		ug/L		96	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	24.4		ug/L		98	42 - 162
1,2,4-Trimethylbenzene	25.0	26.1		ug/L		105	70 - 132
1,3,5-Trimethylbenzene	25.0	26.0		ug/L		104	70 - 130
Vinyl acetate	25.0	28.5		ug/L		114	43 - 163
Vinyl chloride	25.0	20.5		ug/L		82	54 - 135
m-Xylene & p-Xylene	25.0	25.8		ug/L		103	70 - 142
o-Xylene	25.0	25.9		ug/L		103	70 - 130

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

Lab Sample ID: LCS 720-159870/5
Matrix: Water
Analysis Batch: 159870

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,2-Dichloropropane			25.0	26.2		ug/L		105	70 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*93*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*87*		*72 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 720-159870/6
Matrix: Water
Analysis Batch: 159870

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
Methyl tert-butyl ether			25.0	24.5		ug/L		98	62 - 130	3	20
Acetone			125	111		ug/L		89	26 - 180	6	30
Benzene			25.0	25.7		ug/L		103	79 - 130	2	20
Dichlorobromomethane			25.0	25.2		ug/L		101	70 - 130	4	20
Bromobenzene			25.0	25.9		ug/L		104	70 - 130	1	20
Chlorobromomethane			25.0	25.7		ug/L		103	70 - 130	2	20
Bromoform			25.0	25.8		ug/L		103	68 - 136	0	20
Bromomethane			25.0	22.9		ug/L		92	43 - 151	6	20
2-Butanone (MEK)			125	112		ug/L		89	54 - 130	2	20
n-Butylbenzene			25.0	25.7		ug/L		103	70 - 142	1	20
sec-Butylbenzene			25.0	25.1		ug/L		100	70 - 134	0	20
tert-Butylbenzene			25.0	25.3		ug/L		101	70 - 135	0	20
Carbon disulfide			25.0	23.1		ug/L		92	58 - 130	1	20
Carbon tetrachloride			25.0	25.7		ug/L		103	70 - 146	2	20
Chlorobenzene			25.0	25.8		ug/L		103	70 - 130	2	20
Chloroethane			25.0	21.5		ug/L		86	62 - 138	7	20
Chloroform			25.0	25.2		ug/L		101	70 - 130	3	20
Chloromethane			25.0	18.7		ug/L		75	52 - 175	9	20
2-Chlorotoluene			25.0	25.1		ug/L		101	70 - 130	1	20
4-Chlorotoluene			25.0	25.5		ug/L		102	70 - 130	0	20
Chlorodibromomethane			25.0	27.3		ug/L		109	70 - 145	5	20
1,2-Dichlorobenzene			25.0	25.8		ug/L		103	70 - 130	2	20
1,3-Dichlorobenzene			25.0	25.8		ug/L		103	70 - 130	1	20
1,4-Dichlorobenzene			25.0	26.0		ug/L		104	70 - 130	2	20
1,3-Dichloropropane			25.0	25.2		ug/L		101	70 - 130	5	20
1,1-Dichloropropene			25.0	26.8		ug/L		107	70 - 130	2	20
1,2-Dibromo-3-Chloropropane			25.0	24.6		ug/L		99	70 - 136	1	20
Ethylene Dibromide			25.0	25.6		ug/L		103	70 - 130	7	20
Dibromomethane			25.0	25.2		ug/L		101	70 - 130	3	20
Dichlorodifluoromethane			25.0	18.8		ug/L		75	34 - 132	5	20
1,1-Dichloroethane			25.0	25.1		ug/L		100	70 - 130	2	20
1,2-Dichloroethane			25.0	23.5		ug/L		94	61 - 132	3	20
1,1-Dichloroethene			25.0	22.8		ug/L		91	64 - 128	2	20
cis-1,2-Dichloroethene			25.0	24.4		ug/L		97	70 - 130	1	20
trans-1,2-Dichloroethene			25.0	26.2		ug/L		105	68 - 130	1	20
1,2-Dichloropropane			25.0	25.4		ug/L		102	70 - 130	3	20

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

Lab Sample ID: LCSD 720-159870/6
Matrix: Water
Analysis Batch: 159870

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
cis-1,3-Dichloropropene			25.0	28.0		ug/L		112	70 - 130	5	20
trans-1,3-Dichloropropene			25.0	29.6		ug/L		119	70 - 140	5	20
Ethylbenzene			25.0	25.0		ug/L		100	80 - 120	1	20
Hexachlorobutadiene			25.0	27.1		ug/L		108	70 - 130	1	20
2-Hexanone			125	95.5		ug/L		76	60 - 164	8	20
Isopropylbenzene			25.0	25.6		ug/L		102	70 - 130	0	20
4-Isopropyltoluene			25.0	25.3		ug/L		101	70 - 130	1	20
Methylene Chloride			25.0	25.0		ug/L		100	70 - 147	3	20
4-Methyl-2-pentanone (MIBK)			125	102		ug/L		81	58 - 130	6	20
Naphthalene			25.0	27.4		ug/L		109	70 - 130	2	20
N-Propylbenzene			25.0	25.1		ug/L		101	70 - 130	0	20
Styrene			25.0	27.0		ug/L		108	70 - 130	2	20
1,1,1,2-Tetrachloroethane			25.0	26.5		ug/L		106	70 - 130	2	20
1,1,2,2-Tetrachloroethane			25.0	23.6		ug/L		94	70 - 130	1	20
Tetrachloroethene			25.0	26.9		ug/L		107	70 - 130	4	20
Toluene			25.0	25.5		ug/L		102	78 - 120	1	20
1,2,3-Trichlorobenzene			25.0	28.8		ug/L		115	70 - 130	0	20
1,2,4-Trichlorobenzene			25.0	28.9		ug/L		116	70 - 130	0	20
1,1,1-Trichloroethane			25.0	24.8		ug/L		99	70 - 130	1	20
1,1,2-Trichloroethane			25.0	25.8		ug/L		103	70 - 130	4	20
Trichloroethene			25.0	26.8		ug/L		107	70 - 130	2	20
Trichlorofluoromethane			25.0	23.8		ug/L		95	66 - 132	3	20
1,2,3-Trichloropropane			25.0	24.0		ug/L		96	70 - 130	0	20
1,1,2-Trichloro-1,2,2-trifluoroethane			25.0	23.1		ug/L		92	42 - 162	6	20
1,2,4-Trimethylbenzene			25.0	25.8		ug/L		103	70 - 132	1	20
1,3,5-Trimethylbenzene			25.0	25.9		ug/L		104	70 - 130	0	20
Vinyl acetate			25.0	26.6		ug/L		107	43 - 163	7	20
Vinyl chloride			25.0	19.6		ug/L		78	54 - 135	4	20
m-Xylene & p-Xylene			25.0	25.5		ug/L		102	70 - 142	1	20
o-Xylene			25.0	25.6		ug/L		103	70 - 130	1	20
2,2-Dichloropropane			25.0	26.0		ug/L		104	70 - 140	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*96*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*85*		*72 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Lab Sample ID: MB 720-159953/4
Matrix: Water
Analysis Batch: 159953

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			05/23/14 08:49	1
Acetone	ND		50		ug/L			05/23/14 08:49	1
Benzene	ND		0.50		ug/L			05/23/14 08:49	1
Dichlorobromomethane	ND		0.50		ug/L			05/23/14 08:49	1
Bromobenzene	ND		1.0		ug/L			05/23/14 08:49	1

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

Lab Sample ID: MB 720-159953/4
Matrix: Water
Analysis Batch: 159953

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobromomethane	ND		1.0		ug/L			05/23/14 08:49	1
Bromoform	ND		1.0		ug/L			05/23/14 08:49	1
Bromomethane	ND		1.0		ug/L			05/23/14 08:49	1
2-Butanone (MEK)	ND		50		ug/L			05/23/14 08:49	1
n-Butylbenzene	ND		1.0		ug/L			05/23/14 08:49	1
sec-Butylbenzene	ND		1.0		ug/L			05/23/14 08:49	1
tert-Butylbenzene	ND		1.0		ug/L			05/23/14 08:49	1
Carbon disulfide	ND		5.0		ug/L			05/23/14 08:49	1
Carbon tetrachloride	ND		0.50		ug/L			05/23/14 08:49	1
Chlorobenzene	ND		0.50		ug/L			05/23/14 08:49	1
Chloroethane	ND		1.0		ug/L			05/23/14 08:49	1
Chloroform	ND		1.0		ug/L			05/23/14 08:49	1
Chloromethane	ND		1.0		ug/L			05/23/14 08:49	1
2-Chlorotoluene	ND		0.50		ug/L			05/23/14 08:49	1
4-Chlorotoluene	ND		0.50		ug/L			05/23/14 08:49	1
Chlorodibromomethane	ND		0.50		ug/L			05/23/14 08:49	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/23/14 08:49	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/23/14 08:49	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/23/14 08:49	1
1,3-Dichloropropane	ND		1.0		ug/L			05/23/14 08:49	1
1,1-Dichloropropene	ND		0.50		ug/L			05/23/14 08:49	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/23/14 08:49	1
Ethylene Dibromide	ND		0.50		ug/L			05/23/14 08:49	1
Dibromomethane	ND		0.50		ug/L			05/23/14 08:49	1
Dichlorodifluoromethane	ND		0.50		ug/L			05/23/14 08:49	1
1,1-Dichloroethane	ND		0.50		ug/L			05/23/14 08:49	1
1,2-Dichloroethane	ND		0.50		ug/L			05/23/14 08:49	1
1,1-Dichloroethene	ND		0.50		ug/L			05/23/14 08:49	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/23/14 08:49	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/23/14 08:49	1
1,2-Dichloropropane	ND		0.50		ug/L			05/23/14 08:49	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/23/14 08:49	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/23/14 08:49	1
Ethylbenzene	ND		0.50		ug/L			05/23/14 08:49	1
Hexachlorobutadiene	ND		1.0		ug/L			05/23/14 08:49	1
2-Hexanone	ND		50		ug/L			05/23/14 08:49	1
Isopropylbenzene	ND		0.50		ug/L			05/23/14 08:49	1
4-Isopropyltoluene	ND		1.0		ug/L			05/23/14 08:49	1
Methylene Chloride	ND		5.0		ug/L			05/23/14 08:49	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			05/23/14 08:49	1
Naphthalene	ND		1.0		ug/L			05/23/14 08:49	1
N-Propylbenzene	ND		1.0		ug/L			05/23/14 08:49	1
Styrene	ND		0.50		ug/L			05/23/14 08:49	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/23/14 08:49	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/23/14 08:49	1
Tetrachloroethene	ND		0.50		ug/L			05/23/14 08:49	1
Toluene	ND		0.50		ug/L			05/23/14 08:49	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			05/23/14 08:49	1

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

Lab Sample ID: MB 720-159953/4
Matrix: Water
Analysis Batch: 159953

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.0		ug/L			05/23/14 08:49	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/23/14 08:49	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/23/14 08:49	1
Trichloroethene	ND		0.50		ug/L			05/23/14 08:49	1
Trichlorofluoromethane	ND		1.0		ug/L			05/23/14 08:49	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/23/14 08:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/23/14 08:49	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/23/14 08:49	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/23/14 08:49	1
Vinyl acetate	ND		10		ug/L			05/23/14 08:49	1
Vinyl chloride	ND		0.50		ug/L			05/23/14 08:49	1
Xylenes, Total	ND		1.0		ug/L			05/23/14 08:49	1
2,2-Dichloropropane	ND		0.50		ug/L			05/23/14 08:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*67 - 130*		*05/23/14 08:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*72 - 130*		*05/23/14 08:49*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*05/23/14 08:49*	*1*

Lab Sample ID: LCS 720-159953/5
Matrix: Water
Analysis Batch: 159953

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	25.0	26.3		ug/L		105	62 - 130
Acetone	125	132		ug/L		106	26 - 180
Benzene	25.0	25.6		ug/L		102	79 - 130
Dichlorobromomethane	25.0	27.8		ug/L		111	70 - 130
Bromobenzene	25.0	26.6		ug/L		106	70 - 130
Chlorobromomethane	25.0	26.1		ug/L		104	70 - 130
Bromoform	25.0	26.8		ug/L		107	68 - 136
Bromomethane	25.0	25.9		ug/L		104	43 - 151
2-Butanone (MEK)	125	132		ug/L		106	54 - 130
n-Butylbenzene	25.0	27.1		ug/L		109	70 - 142
sec-Butylbenzene	25.0	26.4		ug/L		106	70 - 134
tert-Butylbenzene	25.0	26.5		ug/L		106	70 - 135
Carbon disulfide	25.0	22.8		ug/L		91	58 - 130
Carbon tetrachloride	25.0	28.7		ug/L		115	70 - 146
Chlorobenzene	25.0	25.1		ug/L		100	70 - 130
Chloroethane	25.0	25.9		ug/L		103	62 - 138
Chloroform	25.0	26.3		ug/L		105	70 - 130
Chloromethane	25.0	24.3		ug/L		97	52 - 175
2-Chlorotoluene	25.0	26.8		ug/L		107	70 - 130
4-Chlorotoluene	25.0	26.5		ug/L		106	70 - 130
Chlorodibromomethane	25.0	29.5		ug/L		118	70 - 145
1,2-Dichlorobenzene	25.0	25.6		ug/L		102	70 - 130
1,3-Dichlorobenzene	25.0	26.5		ug/L		106	70 - 130
1,4-Dichlorobenzene	25.0	25.6		ug/L		103	70 - 130

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

Lab Sample ID: LCS 720-159953/5
Matrix: Water
Analysis Batch: 159953

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichloropropane	25.0	26.6		ug/L		106	70 - 130
1,1-Dichloropropene	25.0	28.5		ug/L		114	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	26.8		ug/L		107	70 - 136
Ethylene Dibromide	25.0	27.9		ug/L		112	70 - 130
Dibromomethane	25.0	26.9		ug/L		107	70 - 130
Dichlorodifluoromethane	25.0	27.8		ug/L		111	34 - 132
1,1-Dichloroethane	25.0	26.0		ug/L		104	70 - 130
1,2-Dichloroethane	25.0	25.5		ug/L		102	61 - 132
1,1-Dichloroethene	25.0	24.0		ug/L		96	64 - 128
cis-1,2-Dichloroethene	25.0	26.0		ug/L		104	70 - 130
trans-1,2-Dichloroethene	25.0	25.5		ug/L		102	68 - 130
1,2-Dichloropropane	25.0	26.5		ug/L		106	70 - 130
cis-1,3-Dichloropropene	25.0	28.3		ug/L		113	70 - 130
trans-1,3-Dichloropropene	25.0	30.7		ug/L		123	70 - 140
Ethylbenzene	25.0	24.5		ug/L		98	80 - 120
Hexachlorobutadiene	25.0	26.1		ug/L		104	70 - 130
2-Hexanone	125	142		ug/L		114	60 - 164
Isopropylbenzene	25.0	25.9		ug/L		104	70 - 130
4-Isopropyltoluene	25.0	26.3		ug/L		105	70 - 130
Methylene Chloride	25.0	25.7		ug/L		103	70 - 147
4-Methyl-2-pentanone (MIBK)	125	141		ug/L		112	58 - 130
Naphthalene	25.0	28.7		ug/L		115	70 - 130
N-Propylbenzene	25.0	27.1		ug/L		108	70 - 130
Styrene	25.0	26.5		ug/L		106	70 - 130
1,1,1,2-Tetrachloroethane	25.0	28.2		ug/L		113	70 - 130
1,1,2,2-Tetrachloroethane	25.0	27.3		ug/L		109	70 - 130
Tetrachloroethene	25.0	25.8		ug/L		103	70 - 130
Toluene	25.0	24.4		ug/L		98	78 - 120
1,2,3-Trichlorobenzene	25.0	26.7		ug/L		107	70 - 130
1,2,4-Trichlorobenzene	25.0	27.1		ug/L		108	70 - 130
1,1,1-Trichloroethane	25.0	26.7		ug/L		107	70 - 130
1,1,2-Trichloroethane	25.0	27.0		ug/L		108	70 - 130
Trichloroethene	25.0	26.3		ug/L		105	70 - 130
Trichlorofluoromethane	25.0	27.7		ug/L		111	66 - 132
1,2,3-Trichloropropane	25.0	26.8		ug/L		107	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	23.0		ug/L		92	42 - 162
1,2,4-Trimethylbenzene	25.0	26.8		ug/L		107	70 - 132
1,3,5-Trimethylbenzene	25.0	27.2		ug/L		109	70 - 130
Vinyl acetate	25.0	34.2		ug/L		137	43 - 163
Vinyl chloride	25.0	27.4		ug/L		110	54 - 135
m-Xylene & p-Xylene	25.0	25.4		ug/L		101	70 - 142
o-Xylene	25.0	24.4		ug/L		98	70 - 130
2,2-Dichloropropane	25.0	28.5		ug/L		114	70 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*96*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*100*		*72 - 130*

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

Lab Sample ID: LCS 720-159953/5
Matrix: Water
Analysis Batch: 159953

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	102		70 - 130

Lab Sample ID: LCSD 720-159953/6
Matrix: Water
Analysis Batch: 159953

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
Methyl tert-butyl ether			25.0	25.3		ug/L		101	62 - 130	4	20
Acetone			125	137		ug/L		109	26 - 180	3	30
Benzene			25.0	25.6		ug/L		102	79 - 130	0	20
Dichlorobromomethane			25.0	26.6		ug/L		106	70 - 130	4	20
Bromobenzene			25.0	27.1		ug/L		108	70 - 130	2	20
Chlorobromomethane			25.0	25.1		ug/L		100	70 - 130	4	20
Bromoform			25.0	25.9		ug/L		104	68 - 136	4	20
Bromomethane			25.0	27.0		ug/L		108	43 - 151	4	20
2-Butanone (MEK)			125	129		ug/L		103	54 - 130	2	20
n-Butylbenzene			25.0	28.5		ug/L		114	70 - 142	5	20
sec-Butylbenzene			25.0	28.3		ug/L		113	70 - 134	7	20
tert-Butylbenzene			25.0	28.0		ug/L		112	70 - 135	6	20
Carbon disulfide			25.0	24.1		ug/L		97	58 - 130	6	20
Carbon tetrachloride			25.0	29.2		ug/L		117	70 - 146	2	20
Chlorobenzene			25.0	25.4		ug/L		102	70 - 130	1	20
Chloroethane			25.0	27.0		ug/L		108	62 - 138	4	20
Chloroform			25.0	26.0		ug/L		104	70 - 130	1	20
Chloromethane			25.0	25.6		ug/L		102	52 - 175	5	20
2-Chlorotoluene			25.0	27.9		ug/L		112	70 - 130	4	20
4-Chlorotoluene			25.0	27.5		ug/L		110	70 - 130	3	20
Chlorodibromomethane			25.0	27.6		ug/L		110	70 - 145	7	20
1,2-Dichlorobenzene			25.0	26.4		ug/L		106	70 - 130	3	20
1,3-Dichlorobenzene			25.0	27.1		ug/L		109	70 - 130	2	20
1,4-Dichlorobenzene			25.0	26.0		ug/L		104	70 - 130	1	20
1,3-Dichloropropane			25.0	25.6		ug/L		102	70 - 130	4	20
1,1-Dichloropropene			25.0	29.1		ug/L		117	70 - 130	2	20
1,2-Dibromo-3-Chloropropane			25.0	27.2		ug/L		109	70 - 136	1	20
Ethylene Dibromide			25.0	26.5		ug/L		106	70 - 130	5	20
Dibromomethane			25.0	26.4		ug/L		105	70 - 130	2	20
Dichlorodifluoromethane			25.0	28.8		ug/L		115	34 - 132	3	20
1,1-Dichloroethane			25.0	26.1		ug/L		105	70 - 130	1	20
1,2-Dichloroethane			25.0	24.0		ug/L		96	61 - 132	6	20
1,1-Dichloroethene			25.0	24.6		ug/L		98	64 - 128	2	20
cis-1,2-Dichloroethene			25.0	25.7		ug/L		103	70 - 130	1	20
trans-1,2-Dichloroethene			25.0	26.3		ug/L		105	68 - 130	3	20
1,2-Dichloropropane			25.0	26.2		ug/L		105	70 - 130	1	20
cis-1,3-Dichloropropene			25.0	27.4		ug/L		110	70 - 130	3	20
trans-1,3-Dichloropropene			25.0	29.1		ug/L		117	70 - 140	5	20
Ethylbenzene			25.0	25.1		ug/L		100	80 - 120	2	20
Hexachlorobutadiene			25.0	27.7		ug/L		111	70 - 130	6	20
2-Hexanone			125	131		ug/L		104	60 - 164	9	20

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

Lab Sample ID: LCSD 720-159953/6
Matrix: Water
Analysis Batch: 159953

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
Isopropylbenzene			25.0	26.4		ug/L		105	70 - 130	2	20
4-Isopropyltoluene			25.0	27.6		ug/L		111	70 - 130	5	20
Methylene Chloride			25.0	24.5		ug/L		98	70 - 147	5	20
4-Methyl-2-pentanone (MIBK)			125	131		ug/L		105	58 - 130	7	20
Naphthalene			25.0	29.3		ug/L		117	70 - 130	2	20
N-Propylbenzene			25.0	28.5		ug/L		114	70 - 130	5	20
Styrene			25.0	26.7		ug/L		107	70 - 130	1	20
1,1,1,2-Tetrachloroethane			25.0	28.1		ug/L		113	70 - 130	0	20
1,1,2,2-Tetrachloroethane			25.0	28.0		ug/L		112	70 - 130	3	20
Tetrachloroethene			25.0	26.2		ug/L		105	70 - 130	1	20
Toluene			25.0	25.3		ug/L		101	78 - 120	3	20
1,2,3-Trichlorobenzene			25.0	27.1		ug/L		108	70 - 130	2	20
1,2,4-Trichlorobenzene			25.0	27.3		ug/L		109	70 - 130	1	20
1,1,1-Trichloroethane			25.0	27.3		ug/L		109	70 - 130	2	20
1,1,2-Trichloroethane			25.0	26.0		ug/L		104	70 - 130	4	20
Trichloroethene			25.0	26.4		ug/L		106	70 - 130	1	20
Trichlorofluoromethane			25.0	27.9		ug/L		112	66 - 132	1	20
1,2,3-Trichloropropane			25.0	27.2		ug/L		109	70 - 130	2	20
1,1,2-Trichloro-1,2,2-trifluoroethane			25.0	23.6		ug/L		95	42 - 162	3	20
1,2,4-Trimethylbenzene			25.0	27.7		ug/L		111	70 - 132	3	20
1,3,5-Trimethylbenzene			25.0	28.2		ug/L		113	70 - 130	4	20
Vinyl acetate			25.0	32.4		ug/L		130	43 - 163	5	20
Vinyl chloride			25.0	28.8		ug/L		115	54 - 135	5	20
m-Xylene & p-Xylene			25.0	25.6		ug/L		102	70 - 142	1	20
o-Xylene			25.0	24.7		ug/L		99	70 - 130	1	20
2,2-Dichloropropane			25.0	29.1		ug/L		116	70 - 140	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*93*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*94*		*72 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 720-159880/1-A
Matrix: Water
Analysis Batch: 159907

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 159880

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Bis(2-chloroethyl)ether	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
2-Chlorophenol	ND		4.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
1,3-Dichlorobenzene	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
1,4-Dichlorobenzene	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Benzyl alcohol	ND		5.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
1,2-Dichlorobenzene	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
2-Methylphenol	ND		4.0		ug/L		05/22/14 09:12	05/22/14 17:05	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 720-159880/1-A
Matrix: Water
Analysis Batch: 159907

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 159880

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methylphenol	ND		8.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
N-Nitrosodi-n-propylamine	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Hexachloroethane	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Nitrobenzene	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Isophorone	ND		4.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
2-Nitrophenol	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
2,4-Dimethylphenol	ND		3.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Bis(2-chloroethoxy)methane	ND		5.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
2,4-Dichlorophenol	ND		5.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
1,2,4-Trichlorobenzene	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Naphthalene	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
4-Chloroaniline	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Hexachlorobutadiene	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
4-Chloro-3-methylphenol	ND		5.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
2-Methylnaphthalene	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Hexachlorocyclopentadiene	ND		5.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
2,4,6-Trichlorophenol	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
2,4,5-Trichlorophenol	ND		4.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
2-Chloronaphthalene	ND		4.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
2-Nitroaniline	ND		10		ug/L		05/22/14 09:12	05/22/14 17:05	1
Dimethyl phthalate	ND		5.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Acenaphthylene	ND		4.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
3-Nitroaniline	ND		5.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Acenaphthene	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
2,4-Dinitrophenol	ND		10		ug/L		05/22/14 09:12	05/22/14 17:05	1
4-Nitrophenol	ND		10		ug/L		05/22/14 09:12	05/22/14 17:05	1
Dibenzofuran	ND		4.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
2,4-Dinitrotoluene	ND		4.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
2,6-Dinitrotoluene	ND		5.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Diethyl phthalate	ND		5.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
4-Chlorophenyl phenyl ether	ND		5.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Fluorene	ND		4.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
4-Nitroaniline	ND		10		ug/L		05/22/14 09:12	05/22/14 17:05	1
2-Methyl-4,6-dinitrophenol	ND		10		ug/L		05/22/14 09:12	05/22/14 17:05	1
N-Nitrosodiphenylamine	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
4-Bromophenyl phenyl ether	ND		5.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Hexachlorobenzene	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Pentachlorophenol	ND		10		ug/L		05/22/14 09:12	05/22/14 17:05	1
Phenanthrene	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Anthracene	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Di-n-butyl phthalate	ND		5.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Fluoranthene	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Pyrene	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Butyl benzyl phthalate	ND		5.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
3,3'-Dichlorobenzidine	ND		5.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Benzo[a]anthracene	ND		5.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Bis(2-ethylhexyl) phthalate	ND		10		ug/L		05/22/14 09:12	05/22/14 17:05	1
Chrysene	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 720-159880/1-A
Matrix: Water
Analysis Batch: 159907

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 159880

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate	ND		5.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Benzo[b]fluoranthene	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Benzo[a]pyrene	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Benzo[k]fluoranthene	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Indeno[1,2,3-cd]pyrene	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Benzo[g,h,i]perylene	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Benzoic acid	ND		10		ug/L		05/22/14 09:12	05/22/14 17:05	1
Azobenzene	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1
Dibenz(a,h)anthracene	ND		2.0		ug/L		05/22/14 09:12	05/22/14 17:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*62*		*16 - 72*	*05/22/14 09:12*	*05/22/14 17:05*	*1*
2-Fluorobiphenyl	*59*		*10 - 101*	*05/22/14 09:12*	*05/22/14 17:05*	*1*
Terphenyl-d14	*84*		*42 - 112*	*05/22/14 09:12*	*05/22/14 17:05*	*1*
2-Fluorophenol	*25*		*10 - 65*	*05/22/14 09:12*	*05/22/14 17:05*	*1*
Phenol-d5	*18*		*10 - 46*	*05/22/14 09:12*	*05/22/14 17:05*	*1*
2,4,6-Tribromophenol	*69*		*17 - 100*	*05/22/14 09:12*	*05/22/14 17:05*	*1*

Lab Sample ID: LCS 720-159880/2-A
Matrix: Water
Analysis Batch: 159907

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 159880

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenol	40.0	10.4		ug/L		26	10 - 115
Bis(2-chloroethyl)ether	40.0	25.3		ug/L		63	12 - 115
2-Chlorophenol	40.0	24.4		ug/L		61	14 - 115
1,3-Dichlorobenzene	40.0	25.0		ug/L		63	13 - 115
1,4-Dichlorobenzene	40.0	25.8		ug/L		64	14 - 115
Benzyl alcohol	40.0	24.5		ug/L		61	19 - 115
1,2-Dichlorobenzene	40.0	25.2		ug/L		63	10 - 115
2-Methylphenol	40.0	22.8		ug/L		57	13 - 115
4-Methylphenol	40.0	21.3		ug/L		53	10 - 115
N-Nitrosodi-n-propylamine	40.0	30.3		ug/L		76	17 - 115
Hexachloroethane	40.0	26.7		ug/L		67	9 - 115
Nitrobenzene	40.0	28.8		ug/L		72	18 - 115
Isophorone	40.0	29.8		ug/L		74	18 - 134
2-Nitrophenol	40.0	27.6		ug/L		69	14 - 115
2,4-Dimethylphenol	40.0	29.1		ug/L		73	10 - 119
Bis(2-chloroethoxy)methane	40.0	27.1		ug/L		68	10 - 119
2,4-Dichlorophenol	40.0	28.1		ug/L		70	13 - 118
1,2,4-Trichlorobenzene	40.0	27.8		ug/L		70	10 - 115
Naphthalene	40.0	27.2		ug/L		68	12 - 115
4-Chloroaniline	40.0	24.4		ug/L		61	26 - 115
Hexachlorobutadiene	40.0	30.0		ug/L		75	12 - 115
4-Chloro-3-methylphenol	40.0	30.1		ug/L		75	19 - 128
2-Methylnaphthalene	40.0	28.5		ug/L		71	16 - 115
Hexachlorocyclopentadiene	40.0	22.7		ug/L		57	10 - 115
2,4,6-Trichlorophenol	40.0	27.5		ug/L		69	20 - 120

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 720-159880/2-A
Matrix: Water
Analysis Batch: 159907

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 159880

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-Trichlorophenol	40.0	28.5		ug/L		71	22 - 117
2-Chloronaphthalene	40.0	27.4		ug/L		69	17 - 115
2-Nitroaniline	40.0	28.4		ug/L		71	37 - 119
Dimethyl phthalate	40.0	31.2		ug/L		78	48 - 127
Acenaphthylene	40.0	28.9		ug/L		72	29 - 129
3-Nitroaniline	40.0	25.8		ug/L		64	40 - 115
Acenaphthene	40.0	27.2		ug/L		68	25 - 115
2,4-Dinitrophenol	80.0	58.2		ug/L		73	44 - 116
4-Nitrophenol	80.0	30.7		ug/L		38	20 - 115
Dibenzofuran	40.0	28.1		ug/L		70	28 - 115
2,4-Dinitrotoluene	40.0	29.1		ug/L		73	42 - 115
2,6-Dinitrotoluene	40.0	30.6		ug/L		77	46 - 119
Diethyl phthalate	40.0	31.3		ug/L		78	44 - 115
4-Chlorophenyl phenyl ether	40.0	34.5		ug/L		86	32 - 115
Fluorene	40.0	31.2		ug/L		78	39 - 115
4-Nitroaniline	40.0	36.8		ug/L		92	46 - 115
2-Methyl-4,6-dinitrophenol	80.0	58.7		ug/L		73	42 - 135
N-Nitrosodiphenylamine	40.0	29.2		ug/L		73	41 - 115
4-Bromophenyl phenyl ether	40.0	28.2		ug/L		71	42 - 115
Hexachlorobenzene	40.0	29.3		ug/L		73	49 - 115
Pentachlorophenol	80.0	60.1		ug/L		75	42 - 121
Phenanthrene	40.0	29.7		ug/L		74	54 - 115
Anthracene	40.0	29.9		ug/L		75	54 - 115
Di-n-butyl phthalate	40.0	32.9		ug/L		82	58 - 115
Fluoranthene	40.0	31.9		ug/L		80	65 - 115
Pyrene	40.0	30.8		ug/L		77	53 - 115
Butyl benzyl phthalate	40.0	31.4		ug/L		79	37 - 115
3,3'-Dichlorobenzidine	40.0	29.1		ug/L		73	24 - 110
Benzo[a]anthracene	40.0	31.6		ug/L		79	56 - 115
Bis(2-ethylhexyl) phthalate	40.0	31.6		ug/L		79	59 - 115
Chrysene	40.0	30.0		ug/L		75	50 - 115
Di-n-octyl phthalate	40.0	30.5		ug/L		76	12 - 115
Benzo[b]fluoranthene	40.0	29.8		ug/L		74	50 - 115
Benzo[a]pyrene	40.0	31.8		ug/L		79	55 - 115
Benzo[k]fluoranthene	40.0	31.4		ug/L		78	60 - 115
Indeno[1,2,3-cd]pyrene	40.0	30.8		ug/L		77	49 - 117
Benzo[g,h,i]perylene	40.0	29.7		ug/L		74	54 - 115
Benzoic acid	40.0	8.32	J	ug/L		21	10 - 115
Azobenzene	40.0	29.6		ug/L		74	42 - 115
Dibenz(a,h)anthracene	40.0	30.0		ug/L		75	47 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5	*74*	*X*	*16 - 72*
2-Fluorobiphenyl	*70*		*10 - 101*
Terphenyl-d14	*84*		*42 - 112*
2-Fluorophenol	*31*		*10 - 65*
Phenol-d5	*22*		*10 - 46*
2,4,6-Tribromophenol	*82*		*17 - 100*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 720-159880/3-A
Matrix: Water
Analysis Batch: 159907

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 159880

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phenol	40.0	7.48		ug/L		19	10 - 115	33	51
Bis(2-chloroethyl)ether	40.0	18.8		ug/L		47	12 - 115	29	35
2-Chlorophenol	40.0	17.8		ug/L		44	14 - 115	32	40
1,3-Dichlorobenzene	40.0	18.6		ug/L		46	13 - 115	29	40
1,4-Dichlorobenzene	40.0	19.0		ug/L		48	14 - 115	30	41
Benzyl alcohol	40.0	17.5		ug/L		44	19 - 115	33	35
1,2-Dichlorobenzene	40.0	18.3		ug/L		46	10 - 115	32	35
2-Methylphenol	40.0	16.5		ug/L		41	13 - 115	32	35
4-Methylphenol	40.0	15.8		ug/L		40	10 - 115	30	35
N-Nitrosodi-n-propylamine	40.0	22.3		ug/L		56	17 - 115	31	34
Hexachloroethane	40.0	19.1		ug/L		48	9 - 115	33	35
Nitrobenzene	40.0	21.2		ug/L		53	18 - 115	30	43
Isophorone	40.0	23.2		ug/L		58	18 - 134	25	39
2-Nitrophenol	40.0	19.9		ug/L		50	14 - 115	32	46
2,4-Dimethylphenol	40.0	21.6		ug/L		54	10 - 119	29	44
Bis(2-chloroethoxy)methane	40.0	20.5		ug/L		51	10 - 119	28	46
2,4-Dichlorophenol	40.0	20.3		ug/L		51	13 - 118	32	38
1,2,4-Trichlorobenzene	40.0	20.4		ug/L		51	10 - 115	31	51
Naphthalene	40.0	20.2		ug/L		51	12 - 115	29	42
4-Chloroaniline	40.0	18.8		ug/L		47	26 - 115	26	49
Hexachlorobutadiene	40.0	20.7		ug/L		52	12 - 115	37	46
4-Chloro-3-methylphenol	40.0	25.3		ug/L		63	19 - 128	17	40
2-Methylnaphthalene	40.0	21.3		ug/L		53	16 - 115	29	45
Hexachlorocyclopentadiene	40.0	16.6		ug/L		41	10 - 115	31	63
2,4,6-Trichlorophenol	40.0	24.2		ug/L		61	20 - 120	13	43
2,4,5-Trichlorophenol	40.0	25.0		ug/L		63	22 - 117	13	41
2-Chloronaphthalene	40.0	22.0		ug/L		55	17 - 115	22	49
2-Nitroaniline	40.0	26.6		ug/L		66	37 - 119	7	29
Dimethyl phthalate	40.0	30.4		ug/L		76	48 - 127	3	29
Acenaphthylene	40.0	25.1		ug/L		63	29 - 129	14	40
3-Nitroaniline	40.0	26.4		ug/L		66	40 - 115	2	30
Acenaphthene	40.0	24.3		ug/L		61	25 - 115	12	40
2,4-Dinitrophenol	80.0	60.4		ug/L		75	44 - 116	4	21
4-Nitrophenol	80.0	31.2		ug/L		39	20 - 115	1	32
Dibenzofuran	40.0	25.7		ug/L		64	28 - 115	9	46
2,4-Dinitrotoluene	40.0	30.2		ug/L		76	42 - 115	4	19
2,6-Dinitrotoluene	40.0	28.8		ug/L		72	46 - 119	6	26
Diethyl phthalate	40.0	31.5		ug/L		79	44 - 115	1	24
4-Chlorophenyl phenyl ether	40.0	31.3		ug/L		78	32 - 115	10	38
Fluorene	40.0	29.8		ug/L		75	39 - 115	5	39
4-Nitroaniline	40.0	36.4		ug/L		91	46 - 115	1	23
2-Methyl-4,6-dinitrophenol	80.0	61.1		ug/L		76	42 - 135	4	19
N-Nitrosodiphenylamine	40.0	29.6		ug/L		74	41 - 115	1	27
4-Bromophenyl phenyl ether	40.0	29.1		ug/L		73	42 - 115	3	29
Hexachlorobenzene	40.0	29.7		ug/L		74	49 - 115	1	28
Pentachlorophenol	80.0	63.6		ug/L		80	42 - 121	6	22
Phenanthrene	40.0	30.0		ug/L		75	54 - 115	1	35
Anthracene	40.0	30.6		ug/L		76	54 - 115	2	25

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 720-159880/3-A
Matrix: Water
Analysis Batch: 159907

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 159880

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Di-n-butyl phthalate			40.0	33.8		ug/L		84	58 - 115	3	26
Fluoranthene			40.0	32.6		ug/L		81	65 - 115	2	26
Pyrene			40.0	31.7		ug/L		79	53 - 115	3	22
Butyl benzyl phthalate			40.0	32.0		ug/L		80	37 - 115	2	21
3,3'-Dichlorobenzidine			40.0	30.1		ug/L		75	24 - 110	3	30
Benzo[a]anthracene			40.0	32.2		ug/L		80	56 - 115	2	24
Bis(2-ethylhexyl) phthalate			40.0	33.0		ug/L		82	59 - 115	4	30
Chrysene			40.0	30.6		ug/L		77	50 - 115	2	24
Di-n-octyl phthalate			40.0	31.7		ug/L		79	12 - 115	4	27
Benzo[b]fluoranthene			40.0	28.9		ug/L		72	50 - 115	3	31
Benzo[a]pyrene			40.0	32.6		ug/L		81	55 - 115	3	23
Benzo[k]fluoranthene			40.0	34.9		ug/L		87	60 - 115	11	39
Indeno[1,2,3-cd]pyrene			40.0	32.1		ug/L		80	49 - 117	4	19
Benzo[g,h,i]perylene			40.0	30.8		ug/L		77	54 - 115	4	35
Benzoic acid			40.0	9.44	J	ug/L		24	10 - 115	13	56
Azobenzene			40.0	28.7		ug/L		72	42 - 115	3	35
Dibenz(a,h)anthracene			40.0	31.2		ug/L		78	47 - 127	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Nitrobenzene-d5	*54*		*16 - 72*
2-Fluorobiphenyl	*57*		*10 - 101*
Terphenyl-d14	*85*		*42 - 112*
2-Fluorophenol	*23*		*10 - 65*
Phenol-d5	*15*		*10 - 46*
2,4,6-Tribromophenol	*82*		*17 - 100*

QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: Goodyear -DEX ID No.9578 Castro Valley

TestAmerica Job ID: 720-57584-1

GC/MS VOA

Analysis Batch: 159870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-57584-1	MW-4	Total/NA	Water	8260B	
720-57584-2	MW-5	Total/NA	Water	8260B	
LCS 720-159870/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 720-159870/6	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 720-159870/4	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 159953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-57584-1	MW-4	Total/NA	Water	8260B	
LCS 720-159953/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 720-159953/6	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 720-159953/4	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 159880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-57584-1	MW-4	Total/NA	Water	3510C	
720-57584-2	MW-5	Total/NA	Water	3510C	
LCS 720-159880/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 720-159880/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 720-159880/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 159907

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-57584-1	MW-4	Total/NA	Water	8270C	159880
720-57584-2	MW-5	Total/NA	Water	8270C	159880
LCS 720-159880/2-A	Lab Control Sample	Total/NA	Water	8270C	159880
LCSD 720-159880/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	159880
MB 720-159880/1-A	Method Blank	Total/NA	Water	8270C	159880

Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: Goodyear -DEX ID No.9578 Castro Valley

TestAmerica Job ID: 720-57584-1

Client Sample ID: MW-4

Lab Sample ID: 720-57584-1

Date Collected: 05/21/14 15:10

Matrix: Water

Date Received: 05/21/14 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	159870	05/22/14 17:33	LPL	TAL PLS
Total/NA	Analysis	8260B		1	159953	05/23/14 11:24	PDR	TAL PLS
Total/NA	Prep	3510C			159880	05/22/14 13:13	NDU	TAL PLS
Total/NA	Analysis	8270C		1	159907	05/22/14 18:16	MQL	TAL PLS

Client Sample ID: MW-5

Lab Sample ID: 720-57584-2

Date Collected: 05/21/14 14:00

Matrix: Water

Date Received: 05/21/14 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	159870	05/22/14 18:00	LPL	TAL PLS
Total/NA	Prep	3510C			159880	05/22/14 13:13	NDU	TAL PLS
Total/NA	Analysis	8270C		1	159907	05/22/14 18:40	MQL	TAL PLS

Laboratory References:

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

Certification Summary

Client: Stantec Consulting Corp.
Project/Site: Goodyear -DEX ID No.9578 Castro Valley

TestAmerica Job ID: 720-57584-1

Laboratory: TestAmerica Pleasanton

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

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

Method Summary

Client: Stantec Consulting Corp.
Project/Site: Goodyear -DEX ID No.9578 Castro Valley

TestAmerica Job ID: 720-57584-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PLS
8270C	Semivolatile Organic Compounds (GC/MS)	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: Stantec Consulting Corp.
Project/Site: Goodyear -DEX ID No.9578 Castro Valley

TestAmerica Job ID: 720-57584-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-57584-1	MW-4	Water	05/21/14 15:10	05/21/14 16:50
720-57584-2	MW-5	Water	05/21/14 14:00	05/21/14 16:50

Stantec Consulting Corporation
15575 Los Gatos Boulevard, Bldg C
Los Gatos, California 95032
Tel:408-356-6124 Fax: 408-356-6138

720-57584

Lab No. 153915

Page 1 of 1

5/27/2014

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): Gary Messerotes	**California EDF Report?** ☑ Yes ☐ No
Laboratory / Address: Test America Pleasanton, 1220 Quarry Lane, Pleasanton, CA	**Electronic Deliverables To (Email Address):** gary.messerotes@stantec.com
Phone No.: 925-484-1919 / **Fax No.:**	**Global ID No:** TO600101801
Project Number: 185702561 / **P.O. No.:**	**Samplers Name:** Deven Owens . Krista Myers
Project Name: Former Merritt Tire Sales / Goodyear DEX#9578	**Project Address:** 3430 Castro Vally Blvd., Castro Valley, CA

Project Manager: Gary Messerotes

Sample Name	Field Point Name	Sampling: Date	Sampling: Time	Container: 40 ml VOA x3	Container: SLEEVE	Container: POLY	Container: AMBER	Container:	Preservative: HCl	Preservative: HNO_3	Preservative: ICE	Preservative: NONE	Preservative:	Matrix: WATER	Matrix: SOIL	Matrix:	Analysis Request: Full Scan VOCs by EPA 8260B	Analysis Request: SVOCs by 8270C	Analysis Request:	Analysis Request: Number of Containers	TAT: 12 hr/ 24 hr/ 48 hr/ 72 hr/STD (1 wk)	For Lab Use Only
MW-4	MW-4	5/21/14	1510	3			2		X			X		X			X	X		5	X	
MW-5	MW-5	5/21/14	1400	3			2		X			X		X			X	X		5	X	

720-57584 Chain of Custody

Relinquished by:	Date	Time	Received by:	Remarks:
Krista Myers	5/21/14	1650		7.0°C
Relinquished by:	Date	Time	Received by:	
Relinquished by:	Date	Time	Received by Laboratory:	Bill To: Goodyear Tire & Rubber Co. PO#4505465303

Stantec

Stantec Consulting Corporation
15575 Los Gatos Boulevard, Bldg C
Los Gatos, California 95032
Tel:408-356-6124 Fax: 408-356-6138

720-57584

Lab No. 153915

Page 1 of 1

5/27/2014

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): Gary Messerotes	**California EDF Report?** ☑ Yes ☐ No
Laboratory / Address: Test America Pleasanton, 1220 Quarry Lane, Pleasanton, CA	**Electronic Deliverables To (Email Address):** gary.messerotes@stantec.com
Phone No.: 925-484-1919 / **Fax No.:**	**Global ID No:** TO600101801
Project Number: 185702561 / **P.O. No.:**	**Samplers Name:** Devon Owens, Krista Myers
Project Name: Former Merritt Tire Sales / Goodyear DEX#9578	**Project Address:** 3430 Castro Vally Blvd., Castro Valley, CA
Project Manager: Gary Messerotes	

Sample Name	Field Point Name	Sampling: Date	Sampling: Time	Container: 40 ml VOA x3	Container: SLEEVE	Container: POLY	Container: AMBER	Container:	Preservative: HCl	Preservative: HNO_3	Preservative: ICE	Preservative: NONE	Preservative:	Matrix: WATER	Matrix: SOIL	Analysis Request: Full Scan VOCs by EPA 8260B	Analysis Request: SVOCs by 8270C	Analysis Request:	Analysis Request:	Analysis Request:	Analysis Request:	Analysis Request:	Analysis Request:	Analysis Request:	Analysis Request:	Analysis Request:	Analysis Request:	Analysis Request:	Analysis Request:	Analysis Request:	Number of Containers	TAT: 12 hr/ 24 hr/ 48 hr/ 72 hr/STD (1 wk)	For Lab Use Only
MW-4	MW-4	5/21/14	1510	3			2		X			X		X		X	X														5	X	
MW-5	MW-5	5/21/14	1400	3			2		X			X		X		X	X														5	X	

RUSH

720-57584 Chain of Custody

Relinquished by: Krista Myers	**Date** 5/21/14	**Time** 1650	**Received by:**
Relinquished by:	**Date**	**Time**	**Received by:**
Relinquished by:	**Date**	**Time**	**Received by Laboratory:**

Remarks: 7.0°C

Bill To: Goodyear Tire & Rubber Co. PO#4505465303

Login Sample Receipt Checklist

Client: Stantec Consulting Corp.

Job Number: 720-57584-1

Login Number: 57584

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Bullock, Tracy

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	

2012 FIELD DATA SHEETS

3/13/12

Goodyear – Castro Valley
T. Rhodes

1745 Arrive onsite. Jack, Joe & Bill (ICS) onsite.
1300 H&S, open wells.
1830 Photo-document utility markings and condition of apron.
1850 Tag wells: MW-1 = 7.80 ft. bTOC (18.98 TD – soft bottom)
MW-2 = 5.83 ft. bTOC (17.90 TD – soft bottom)
MW-4 = 7.61 ft. bTOC (14.95 TD)
TOC ~ 0.5 ft. below grade, and MW-2 is ~1 ft. below other wells, so static water below excavation ≡ 7.5 ft.
1920 Bill returns w/ plywood to protect bay doors. Also brought delineators and caution tape, as fencing was also forgotten.
1940 Lay out Visqueen for spoils.
1950 Begin breaking concrete @ bay 5
2025 Slight hydrocarbon odor beneath concrete. 0.1 ppm hit on PID (mostly Ø.
2110 Water line (2-1") paralled to building unearthed. 12" deep, 19" from foundation. 23" from building on far side of bay (13 ft. to north). Called Jack, chose to not excavate under line, gave it ~6".
2120 Begin first trench: 5 ft. wide. At 4.5 ft deep, PID = 0.7 in hole. No hit on bucket.
2140 At 7ft. 2.0 PID in hole, Ø to 0.2 in breathing zone.
2210 First trench done. 5' x 13' x 8' deep. Soil @ 8' dry to moist.
Collect EX-1 through EX-4. Sidewall samples are ~5 ft. deep.
Field screen w/ PID: EX-1 = 31.1 ppm, EX-2 = 52.8 ppm, EX-3 = 37.1, EX-4 = 42.1
2230 Begin next trench, 4 ft. wide w/ 4 ft. partition between it & 1st trench.
2240 4" clay sewer line encountered, broken & filled w/ dirt. (Abandoned).
At ~5' bgs, 2.7 ppm in hole, Ø - 0.1 in breathing zone.
2310 3.0 ppm in hole (7.5 ft. deep), ~0.2 in breathing zone.
2325 2nd trench complete to 8 ft bgs. → A little bit of water visible in 1st trench.
→ 4' x 12.5' x 8' deep

3/14/12

note ~1" steel line found along N. side of trench wall. Disconnected / abandoned.
0240 Soil pile moved to spoils area by porta-potty. Begin sweeping site. Cover pile w/ visqueen.
0100 Plates arranged in prep. for slurry arrival.
0530 Apply ORC to bottom of trenches: 60 lbs / 9 linear feet of ex. = 2 buckets
0545 1st slurry truck arrives
0555 2nd, 3rd. 9 yd³ mud/truck, 27 yd³ total for 9' linear of ex.

reminders: 1.5 times more slurry
– woodward concrete cover?
– more pedestrian diversion

ORC: $\frac{40 \text{ lbs}}{900 \text{ ft}^2} = 0.44 \text{ lbs/ft}^2$
Trench 1 = 29 lbs
2 = 22 lbs

0600 Sample courrier arrives onsite, sign over EX-1 → EX-4.
0630 3rd & final slurry truck departs, start plating
0650 Plates set, cold patch between plates & bay door.
0720 All cleaned up, soil area roped off. Measure for fence.
0730 MoB (ICS). Show German plates and slight wobble. He ok's.
0740 MoB

1750 Arr. onsite. 120' fence & light tower delivered.
1800 BSU & Joe onsite, walk through plan. 54 yd³ to arr. by 515.
Plan to trench 4 trenches in bay 7 & 8.
1820 photo site pre-work (ie bay doors). Mark sample spots per Gary's diagram.
1830 H&S
1840 mrk out trenches for tonight from S. side Bay 7, trench 5.5', leave 2.5', trench 5.5', leave 2.5', trench 6', leave 4'. = 17 ft. total trench
1900 Concrete crushing truck arr. Load w/ concrete from bay 5. Will also take from bays 7 & 8. (H&S w/driver).
1950 Setup for breaking; plywood over bay doors.
2000 Begin breaking Bay 7, then 8
2045 Done w/ breaking, begin loading concrete slabs into dump truck
2130 Bay 7 and half of 8 done, moderate odor @ former UST, 0.7 ppm max hit on PID below concrete slabs. Breathing zone 0.1 – 0.2 ppm.
2150 Dump truck off site, remaining concrete to go next to soil pile.
2200 All concrete cleared, begin excavating N. most trench on Bay 8.
2300 At ~4 ft. deep, 13 ppm over hole (max), breathing zone 0.1 to 1.0.
Note: water line found @ 20" from foundation across entire span of Bays 7 & 8. Excavation begins @ 26" from foundation.
2318 PID ~20 ppm over hole (@ 6 ft. deep), breathing zone 0 to 3.6 (breezy)
2324 Collect EX-5 from E. wall @ ~5' depth bgs. Field screen = 235 ppm
2344 EX-6 = 252 ppm — oily sheen on soil samples
2359 EX-7 = 168 ppm — bottom → East wall
2430 Excavation of trench #3 complete. Begin clean up temp. stock pile over next trench. TD of trench #3 = 7.75' bgs
2445 Begin trench #4: splits bay 7 & 8.
0106 Former UST feeder pipe runs from bldg., curved down & cut off. Also have thin gauge electric wires found, cross excavation @ W. wall. Ran to UST?

- note 7 day wait before trenching against sand-cement slurry
- yd³/truck = 9
- deliv. time of 54 yd³: 515

5.5' linear ft. ex. = 36 lbs OR 2 1/2 bbl
6' " " = 40 lbs

8/15/12

0117 PID in breathing zone 2.0 to 17.6 ppm. Strong odor. Visible oily sheen on all soil removed. Grab sample @ 285 ppm.

0126 Free product pooling in hole @ 4.5' bgs. Call Jack. Quarantine soil. Plan to move to next hole, give time to dissipate.
note that caving-in occurring on N-wall of trench #4, likely due to old and poorly compacted backfill after UST removal.

0140 Begin Southern-most trench, #5

0240 At 6.75' bgs, air over hole = 35 ppm, breathing zone = 1.2 - 5.0 ppm
note: same elec. wires found along W. wall @ ~2' bgs. Run to well? As not in proper conduit, uninspected installation.

0530 Trench #5 done, TD 7.5'. Resume on trench #4.

0340 Trench #4 (middle trench of the 3) North wall continues to collapse due to UST backfill. Option 1 to dig out wall, slurry #3, #4 & dividing wall, but would close bays 7 & 8 for most of day.
Option 2 to backfill #4, slurry N. & S. trenches (#3 & #5), plate all.
Call Jack, go with opt. 2.

0430 Done w/ backfill, clean up loose soil on ground

0445 Add ORC, 35 lbs to #5 (5.5' wide), 40 lbs to #3 (6' wide) = 2 ½ buckets.
Start distributing plates.

0515 1st slurry truck. Only 4 to arrive (36 yd³). Plant added accelerite.

0525 2nd truck

0538 3rd truck

0555 4th truck. not needed, so used 27 yd³, bought 36 yd³.

0615 Courier arrives, pick up EX-5, 6 & 7.

0700 plates set, cold patch edges & gaps.

0725 cold set patched.

0730 HOS

~~0745~~ Onsite. ICS (Bill, Joe), Rob (Woodward coring) onsite.

0800 Drill rig & support truck arr.
H&S, site walk. Plan to core, set up drillers, pull plates from N. side bay 5, S. side bay 7, break & trench in bay 6.

0845 Begin coring 14".

1900 Begin post hole/HA. - ICS breaking up bay 6 concrete

- 10 ft. plates?

1920 MW-5 H.A. to 5', Rob offsite, setup drill rig.
1930 Start split spoon sampling (2 ft. at a time).
2000 Start excavating middle trench @ bay 6 (5' trench)
2024 Driller's augers @ 13', water fills HSA to 7'.
2058 Air above T6 = 0.0 ppm, even though slight odor.
2100 Begin pulling augers. Well set to 20', 13' screen w/ slip cap drilled/screwed on.
2200 Well grouted, set well box
2240 Wood ward offsite. Finish T6 to ~7.75' bgs. Abandoned water line encountered
2245 Remove plates from Bay 5, start final trench of bay
2410 done w/ T7; bo-eak. note PID=0.0 above both trenches.
2430 Map out remaining trenches. Now w/ 12' plates, complete bay 7/8 (10.5' trench @ former UST) and half of storage bay tomorrow.
Only half storage bay + two 4' trenches @ bay 6 for last day
0100 Remove plates from N. end of bay 8, prep jackhammer for storage bay. w/in 1ft of
0210 Concrete broken up to high volt line (@ slight angle towards building corner). Tomorrow, will excavate S. side of N trench, pull by hand away from high volt area.
0225 Begin plating storage bays, bay 7 and all other temp. removed.
0330 cold patch seams, cover soil piles
0430 Add ORC, 25 lbs to T7 (4'), 35 lbs to T6 (5').
0505 1st Cement truck arrives.
0525 2nd truck.
0550 3rd & final truck. Resume plating.
0614 sample pick up. (one MW-5 sample from 6.5-7').
0635 plates set, cold patch start. Schedule remaining trenches w/ Jack
0730 MOB

w/ excel. pour more AM, plate 3 hrs. later, drive 36 hrs later
slurry 24 hrs min before concrete
compaction test? back fill class II?

Left plates? bigger excavator
yds for Fri AM? 54
BH: call cons. subs.

8/16/12

1750 Arr. onsite
1815 Communicate with George (conc. restoration) through Bill: if ~7AM start on Monday, grade surface, set forms/wire mesh, pour, wait. plate by mid-afternoon, drive on by end of day ~5 pm.
Will wait for site walk with George to confirm, then propose schedule to Herman.
1850 H&S.
1900 Dump trucks arr., start loading concrete.
1930 George onsite,
Storage 15' x 20' x 4"
5-8 51' x 20' x 4"
66' x 20.3 x 0.3 = 17 yds.
20', 4"
Prep. @ night, run trucks in 5am — (2 trucks), give all day, plate in AM
or pour at night, George to figure out if plant will deliver.
2000 Remove plates from bay 6 through storage.
Haul 12' plates to area for easy placement later (use front loader).
2030 Begin pulling soil from T4. Top 3 ft. is "clean" backfill, place in standard soil pile. from 3' to 8' bgs, goes into dirty if free product noted.
2125 PID above hole, 5 ppm. breathing zone 0-2 ppm (@ 3' bgs).
2145 digging down T9 (native soil S. of T5 backfill). At 6' bgs, no free product, continue dumping in "clean" pile.
2221 Collect EX-8 @ ~5' bgs on E. wall of T9. 113 ppm field screen.
2230 PID 8.5 ppm above T9 @ 7.5' bgs, B-2 ppm in breathing zone
2245 At ~5' bgs in T8, sandy backfill material w/ sheen & some free product: segregate in dirty pile. 35 ppm over full excavator bucket. Field screen = 160 ppm. Same with T4.
Note sandy backfill is f. to c., no pea gravel.
2311 At 6.5' bgs, out of backfill, into native in T4 & T8. no free product, minimal sheen = soil goes to "clean" pile.
2340 Collect EX-9 from base of T9, field screen = 69.3
2353 Collect EX-10 from W. wall of T9, field screen = 114 (5'-6' bgs)
2410 Complete T4, T8, T9 to 7.5' bgs. 11 ft. wide.
2420 Begin T10 (4.5' trench between bay 8 & storage bay).
2435 At ~3' bgs, PID = 2.7 over hole. Only faint odor.

8/17/12

of T10

0140 EX-11, E. side wall @ 5'-6' bgs. PID = 49.5
0157 EX-12, bottom of T10, PID = 52.8
0208 EX-13, W. side of T10 @ 5'-6' bgs. PID = 35.4
0220 Done w/ T10, to 7.75' bgs.
Break
0320 Clean up loose dirt around excavations. Start distributing sand bags to prop up plates.
0350 Plate all non-slurry areas
0415 Add ORC: 75 lbs to T4/8/9, 30 lbs to T10 = 3.5 buckets total
0430 Replacement excavator arrives: able to move 12'x8' plates.
0510 1st cement truck; 530 2nd truck; 550 3rd; 605 4th; 0620 5th
0625 Courrier picked up samples.
note: mis-calc. again, only used 45 yd³ (5 of 6 trucks).
0645 Place 8'x12' plates over T4/8/9, apply cold patch to all seams.
0710 Talk to German re pour dates, ok's Tuesday. Not keen on half of Wed. Bill interrupts & insists that cars can drive over fresh pour in 6 hours = mid-afternoon Tuesday. Tell Bill he now has to make this happen (pour @ night?)
0725 MOB. Soil piles covered, equipment fenced off.

1745 Arr. onsite, discuss schedule w/ Bill:
~~Sun~~ night, one ~6' trench (hand clean near high volt), no concrete work. Start 12 midnight, slurry pour @ 6AM
Mon, Start @ 7~~PM~~, peel apron back, grade, forms. Dept midnight, resume ~5 AM (give conc. crew sleep time).
1800 woodward onsite, H&S, set up fences
1830 Start dev. on MW-2.
2045 H&S w/ ICS (Bill & young Joe):
2210 PID 5.2 ppm over trench T11 (N. side bay 6), Ø-0.1 breathing zone
2245 Finish developing MW-1, 2, 4, 5. 2 drums generated, labeled.
2300 Woodward off site. Left one empty drum for sampling.
2305 Collect EX-14 from E wall of T11 (6' bgs). PID = 15.4
2310 Collect EX-15 from bottom of T11. PID = 46.8
2312 Collect EX-16 from W wall @ 6' bgs. PID = 10.3
2315 T11 completed to 7.75' bgs
2325 Move more plates, begin on T12.
2340 PID = 0.4 ppm over T12 @ 3.5' bgs, Ø in breathing zone.

8/18/12

2410 Collect EX-17, E wall of T12 @ 6' bgs. PID = 4.7
2425 Collect EX-18 from bottom of T12. PID = 17.9
2430 Collect EX-19 from W wall @ 6' bgs. PID = 5.0
2440 T12 completed to 7.75' bgs.
0100 sand bag & plate non-slurry areas. Cold patch.
0145 Apply ORC to T11 & T12 (~4' each = 30 lbs each).
0210 Cover soil piles
0230 Clean up dirt clods, inside development mud from concrete.
Break
0430 Open up fencing, stage area for slurry trucks.
0515 1st cement truck arr.
0530 2nd truck arr. Order clean up truck w/ 5 yd³
0620 Final truck arr., 23 yd³ total.
0720 All plates & cold patch done. Sweep. Enclose soil area
0725 MOB

8/20/12 A. Jansen.
1200 Arrive on Site. Meet w/ Bill Lewis & Joe Ellis w/ ICS. discuss SOW & conduct tailgate meeting.
Set-up exclusion Zone.
230 Excavation 6'x12'x7.5 bgs. Dark brown clay light sheen on soil. 95.4 PPM on soil in bag. PID reading
Collect ~~EX-20~~ EX-20 @ 230 and at 6.5' bgs on NW corner PID 8.2 ppm over excavation. (Stock area) Breathing Zone
250 Finished excavation and wait for slurry truck. Soil stockpile covered.
Break
500 Bill and Joe began moving ORC bags to excavation, sweeping / clean up.
550 Called Guy to inform him about the sheen observed in soil from excavation.
555 Slurry truck arrives. (1st truck)
626 Slurry truck arrives (2nd truck)
040 Started placing plates / clean up / Enclose soil area.
710 MOB

8/20/12

1840 Arrive on Site, Bill Lewis + 3 ICS employees and Cal West Concrete cutting (1 Employee) on site. H+S meeting and discuss scope of work.

1900 Began removing cold patch + planks from excavation.

1922 Alicia sampled small soil stockpile Cmin four locations - (Comp-2).

1949 Began saw cutting

1954 Truck arrives to pick up concrete apron

2032 Cal West leaves Site.

2136 Truck leaves site w/ concrete debris

2138 Called Jack to inform about broken Bay 6 window during concrete apron removal. No plywood used during concrete apron removal.

2225 Finishing placing rebar in excavation.

2240 Clean-up and secure site. ICS to stay on Site until Concrete pour truck arrives at 4:45am

8/21/12 -T. Rhodes

0500 Arrive onsite, ICS crew onsite (Jorge + crew of 3).

0505 1st concrete truck arr., prep. tools/equip.

0515 Begin first pour @ Bay 9.

0535 1st pour complete, concrete up to midway bay 8. Smooth-out.

0555 2nd truck arr.
note: Bill offsite, but will call window repair @ 8am, schedule for mid-morning.

0620 2nd pour complete to mid bay 6. Clean up truck ordered

0655 3rd truck running late. Inspector arr. onsite, okay w/ window repair mid-morning, okay w/ late truck if it pours by 8AM.
note: joints cut while waiting.

0710 3rd truck arr.

0740 3rd pour complete, truck offsite. Continue smoothing

0815 Smoothing / finishing ~ 40% done, open up wells to bay.
Bottle count: 8-1L w/HCl, 12 voa w/ HCl, 16-1L amber
2 amber w/HCl, 4 amber, 3 voa per well.

0900 Done smoothing, clean up.
note: window repair - to arr. ~1000

1000 Surveyors (MCE) arr. onsite - will shoot MW-1, 4, 5, oil-water separators, NW & SW corners of bldg. + apron

1140	Crew depts, concrete done & topped off. Jorge stays to oversee window repair.
1330	Window repaired, ICS off site. MW-5 left to sample
1520	clean up, label drums (~2.5 full), lock post to potty, close gates around soil.
	note: 5 day turn on hot soil = ~~7~~ -10 days to vacate.
	note: plates on 8/22 by noon.
1540	Inform Crew man of schedule.
1550	MOB to test annex.
1625	MOB from test annex.

- soil hauled date?

Stantec

Field Report

Field Office: Los Gatos	**Date:** 5/21/14
	Job No.: / **Task No.:**
	Project:
Prepared By: Krista Myers	**Location:** 3430 Castro Valley Blvd.
To:	**Weather:** / **Temp.**
	Client:
	Contractor:
Attn:	

Page 1 of 3

0840 leave LG; drive to Pine in Hayward

0950 arrive @ Pine, pick up equipment

1100 arrive on site, scope of work = sampling mw5 (20 ft well, 2") and mw-4 (15 ft well, 1")

1130 tag both wells mw-5 & mw-4 for DTW & DTB; see field data sheets. must drive back to pine to pick up 1" pump + bailer

1230 - 1300 lunch

1300 - begin purge of mw-5;
put pump down well + tubing. clamp tubing ~couple feet from bottom of well.
Flow through device used to collect field parameters; connect read out device to flow through. connect pipe from pump to flow through cell (make sure nuts are completely screwed on (or use kular tape)).
inflow tube on bottom - outflow tube on top

Equipment Used:		
Contractor Hours:	**Staff Hours:**	**Mileage:**
Copies To:	**Project Manager:**	
	Reviewed By:	

put top tube into purge bucket
low flow battery connection automatically turns on;
turn dial dark to ~~10~~ 6 Volts.
keep water level meter in hole as to not draw water level down too much.
plug battery into pump; automatically starts.
collect parameters from first draw.
make sure water is not drawing down; pump rate depends on how efficient the formation recharges

LIST OF instruments needed: (2" well, 15 ft depth)
- DTW meter
- buckets
- 12 V monsoon pump (varies depending on well diameter / recharge rate) (low flow pump) comes w/ connector to car battery.
- flow through cell (to collect field parameters)
- YSI meter (to connect to flow through cell)
- tubing (total depth of well + ~5-10 ft extra to connect to pump / to go into bucket)
- for limited access area; you need a battery (if no car battery)

collect field parameters @ each purge volume.; or more if

1400 sample collected MW-5; 3 40-VOAs + 3 1L ambers.

Stantec

Field Report

Field Office: Los Gatos.	**Date:** 5/21/14
	Job No.: / **Task No.:**
	Project: Former Goodyear
Prepared By: Krista Myers	**Location:** 3430 Castro Valley Blvd
To:	**Weather:** Sunny / **Temp.**
	Client: Goodyear
	Contractor:
Attn:	

Page 3 of 3

0920 purge mw-4 (1" diameter, 15' deep)
Perry (peristaltic) pump
thick inner diameter tubing goes inside of pump (geo pump)
(Kind of stirs up water; not good for VOCs b/c it volatilizes them)
connect battery to car battery or cigarette lighter or to pounded battery. Pay attention to which way the pump is running - determines which way flow is going to be.
connect thinner/stiffer tubing inside of the soft thick inner diameter tubing. Put wrench/clamp on tubing so it does not go down the hole
- perry pump does not have the built in instrument for field parameters; ∴ using myron EP
- adjust dial on pump for pump rate - try not to induce too much draw down

Equipment Used:

Contractor Hours:	**Staff Hours:**	**Mileage:**
Copies To:	**Project Manager:** Gary messersmith	
	Reviewed By:	

STANTEC CONSULTING
GROUNDWATER SAMPLE FIELD DATA SHEET

Project No. _____ Purged By: Devon Owens / K Myers Well I.D.: MW-4

Client Name: Former Goodyear Sampled By: Devon Owens / K Myers Sample I.D.: MW-4

Location: 3430 Castro Valley Blvd What QA Samples?: _____

Date Purged: 5/21/14 Start (2400hr): 1445 End (2400hr): 1515

Date Sampled: 5/21/14 Sample Time (2400hr): 1510

Casing Diameter:	2"	3"	4"	5"	6"	8"	Other 1"
Casing Volume: (gallons per foot)	(0.17)	(0.38)	(0.67)	(1.02)	(1.50)	(2.60)	(0.0654)

Total depth (feet) = 15.20 Casing Volume (gal) = 0.48

Depth to water (feet) = 7.92 Calculated Purge (gal) = 1.43 (3 casing vols.)

Water column height (feet) = 7.28 Actual Purge (gal) = 1.5

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity ~~(umhos/cm)~~ mS	pH (units)	Color (visual)	DTW (ft)	ORP (mV)
~~5/21/14~~	~~1340~~	~~2.5~~	~~19.95~~					
5/21/14	1445	0	21.7	561.3	6.03	clear	8.0	180
	1455	0.5	21.4	550	6.33	clear	8.04	170
	1500	1	21.1	551.3	6.46	clear	8.05	184
☒	1505	1.5	21.4	550.0	6.58	clear	8.05	197

D.O. _____ mg/l, _____ %

PURGING EQUIPMENT

___ Well Wizard Bladder Pump
___ Active Extraction Well Pump
___ Submersible Pump
☒ Peristaltic Pump
Other: _____
Pump Depth: _____ (feet)

___ Bailer (disposable)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated _____

SAMPLING EQUIPMENT

___ WW Bladder Pump
___ Sample Port
___ Submersible Pump
___ Peristaltic Pump
Other: _____

☒ Bailer (disposable)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated: _____

Analyses: _____

Sample Vessel / Preservative: _____ Odor: _____

Well Integrity: OK

Remarks: water in well box - well cap submerged; used myron 6P Perry pump for purging - 1" bailer for sampling

Signature: _____ Page 1 of __

STANTEC CONSULTING
GROUNDWATER SAMPLE FIELD DATA SHEET

Project No. _____ Purged By: Devon Owens / K Myers Well I.D.: MW-5

Client Name: Former Goodyear Sampled By: Devon Owens / K Myers Sample I.D.: MW-5

Location: 3430 Castro Valley Blvd What QA Samples?: _____

Date Purged: 5/21/14 Start (2400hr): 1330 End (2400hr): 1410

Date Sampled: 5/21/14 Sample Time (2400hr): 1400

Casing Diameter:	2" X	3" ___	4" ___	5" ___	6" ___	8" ___	Other ___
Casing Volume: (gallons per foot)	(0.17)	(0.38)	(0.67)	(1.02)	(1.50)	(2.60)	( )

Total depth (feet) = 20.03 Casing Volume (gal) = 2.36

Depth to water (feet) = 6.15 Calculated Purge (gal) = 7.08 (3 casing vols.)

Water column height (feet) = 13.88 Actual Purge (gal) = ~~7.00~~ 7.5 Km

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (umhos/cm) ms/cm	pH (units)	Color (visual)	DTW (ft)	DO (mg/L)
5/21/14	1330	0	20.99	0.509	5.03	light brown	6.20	Km 1.31
	1340	2.5	19.95	0.494	5.41	cloudy	6.33	1.28
	1345	5	19.91	0.494	5.65	clear	6.32	0.80
	1400	7.5	19.98	0.495	5.61	clear	6.33	0.57

(mV) ORP
NA
-14.7
-41
-49.

D.O. _____ mg/l, _____ %

PURGING EQUIPMENT

___ Well Wizard Bladder Pump
___ Active Extraction Well Pump
X Submersible Pump
___ Peristaltic Pump
Other: _____
Pump Depth: _____ (feet)

___ Bailer (disposable)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated _____

SAMPLING EQUIPMENT

___ WW Bladder Pump
___ Sample Port
X Submersible Pump
___ Peristaltic Pump
Other: _____

___ Bailer (disposable)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated: _____

Analyses: VOC SVOC

Sample Vessel / Preservative: HCl (40-VOA) Odor: none

Well Integrity: good

Remarks: used YSI 556 w/ Flow through cell

Signature: _____ Page 1 of __

SOPs

1.0 PURPOSE & APPLICABILITY

The purpose of this document is to define the standard operating procedure (SOP) for collecting soil samples when drilling with hollow-stem augers, direct push, and hand auger methods. The ultimate goal of the sampling program is to obtain samples that meet acceptable standards of accuracy, precision, comparability, representativeness, and completeness. All steps that could affect tracking, documentation, or integrity of samples have been explained in sufficient detail to allow different sampling personnel to collect samples that are equally reliable and consistent.

This procedure provides descriptions of equipment, field procedures, sample containers, decontamination, documentation, decontamination, storage, holding times, and field quality assurance (QA) and quality control (QC) procedures necessary to collect soil samples.

While the Project Quality Assurance Project Plan (QAPP) is intended to be strictly followed, it must be recognized that field conditions may force some modifications to the SOP. Any modification to the procedure shall be approved by the Project Manager or Task Leader in advance. Where SOP modification is planned sufficiently in advance, regulatory agency concurrence will be sought prior to conducting the specific activity. When direct contact with regulatory agency staff is not possible, or unscheduled delays will result, such as during field activities, regulatory agency will be notified of deviations from the SOPs, in writing, as soon as possible after the occurrence.

2.0 DEFINITIONS

HASP	Health and Safety Plan
OSHA	Occupational Safety and Health Administration
PID	Photoionization Detector
PPE	Personal Protective Equipment
PVC	Polyvinyl Chloride
QA	Quality Assurance
QC	Quality Control
QAPP	Quality Assurance Project Plan
SAP	Sampling and Analysis Plan
SOP	Standard Operating Procedure
USCS	Unified Soil Classification System
VOA	Volatile Organic Analysis
VOCs	Volatile Organic Compounds

3.0 HEALTH AND SAFETY CONSIDERATIONS

Refer to the site-specific Health and Safety Plan (HASP) for health and safety considerations applicable to soil sampling.

Many hazards should be considered during the soil sampling activities, careful consideration of these hazards by the project team is essential. Some of the hazards include the following:

- Proper utility clearance must be performed in accordance with the Pre-Drilling/Excavation Checklist and Utility Clearance Log. There must be a minimum clearance of five (5) feet in addition to the diameter of the drilling augers. Client-specific requirements may be more restrictive.

- Traffic control may be required depending on the proximity of soil sampling activities to the roadway. Traffic control plans should be carefully evaluated to adequately delineate the work zone and provide the necessary safety factors.

- Personal protective equipment (PPE) including hard hats, high visibility traffic vest, gloves, hip boots or chest waders and other appropriate clothing;

- Heat and cold stress;

- Biological hazards such as insects and spiders. Appropriate clothing is required such as long-sleeved shirts and long pants.

- Bloodborne pathogens. Some of our sites may have syringes and other drug paraphernalia that must be carefully avoided.

- Chemical exposure on sites with open contamination. Respiratory protection may be necessary. Proper selection of respiratory protection is essential and an understanding of its limitation (i.e., negative pressure respiratory protection does not supply oxygen in an oxygen-deficient atmosphere). Staff should familiarize themselves with exposure limits for contaminants of concern.

- Use of air monitoring instrumentation will likely be necessary. We must be careful to make sure that our instrumentation is appropriate for the airborne contaminants of interest and that our staff understands the limitations of the instrumentation. Staff must also understand and perform calibration including zeroing with zero gas cylinders and appropriate other calibration gases.

- Decontamination of equipment and personnel must be properly designed and constructed to be sure that contamination is kept within the boundaries of the exclusion zone;

- Noise and proper use of hearing protection devices such as ear plugs and muffs.

- Emergency action plan must be carefully coordinated in advance between Stantec, our subcontractors, the client, and emergency responders.

All of these risks and others must be discussed with our subcontractors and clients to be sure they are properly addressed. Once the issues have been addressed at a project management level, they must be communicated to the staff that will actually perform the work. Details of procedures, instrument measurements and calibration, and other activities must be recorded in the field log and/or on data collection forms.

4.0 QUALITY ASSURANCE PLANNING CONSIDERATIONS

Soil sampling shall be done by personnel familiar with the common sources of random and systematic error so appropriate decisions can be made in the field. Some of the common phenomena which may degrade the sample quality collected from the well point are listed below.

- **Volatilization.** Volatilization occurs when the sample is in contact with air for an extended time. Typically volatilization occurs if the sample undergoes excessive disturbance during sampling or if air pockets exist at the top of the container. Limiting disturbance during sampling, filling sample containers in order of volatility, and tight capping of bottles immediately after filling will minimize these errors.

- **Adsorption/desorption.** This is the gain or loss of chemicals through exchange across surfaces. Adsorption may occur when the sample comes in contact with large surface areas such as the sampling container. Thorough decontamination of sample collection containers/monitoring equipment probes along with expedient transfer from the sample container to the labrotory container minimizes sorption effects.

- **Chemical reaction.** Dissolved chemical constituents may change due to reactions such as oxidation, hydrolysis, precipitation, etc. Proper preservation and adherence to holding times minimize these reactions.

- **Sample contamination.** Sample contamination is the most common source of errors and can result from several factors, including incomplete decontamination, contact with other samples, and contact with the atmosphere. Careful attention to decontamination, handling, and container sealing minimizes sample contamination.

5.0 RESPONSIBILITIES

The Project Manager or Task Leader will be responsible for assigning project staff to complete soil sampling activities. The Task Leader will also be responsible for assuring that this and any other appropriate procedures are followed by all project personnel.

The project staff assigned to the well point installation and sediment pore water sampling will be responsible for completing their tasks according to this and other appropriate procedures. All staff will be responsible for reporting deviations from the procedure or nonconformance to the Task Leader, Project Manager or Project QA/QC Officer.

6.0 TRAINING AND QUALIFICATIONS

Only qualified personnel shall be allowed to perform this procedure. At a minimum, Stantec employees qualified to perform soil sampling will be required to have:

- Read this SOP.

- Read project-specific QAPP.
- Indicated to the Task Leader that all procedures contained in this SOP are understood.
- Completed the Occupational Safety and Health Administration (OSHA) 40-hour training course, and/or annual 8-hour refresher course, as appropriate.
- Coordinated any proposed sampling activites with the laboratory to ensure proper sampling procedures.
- Previously performed soil sampling activities generally consistent with those described in this SOP.

Stantec employees who do not have previous experience with soil sampling will be trained on site by a qualified Stantec employee, and will be supervised directly by that employee until they have demonstrated an ability to perform the procedures.

7.0 REQUIRED MATERIALS

The following is a typical list of equipment that may be needed to perform soil sampling:

- Auger rig or direct-push unit with appropriate equipment for sampling, or hand auger.
- Continuous soil sampler (2-½-inch x 18-inch or 2-foot split-spoon sample tube) or direct-push clear acetate or polyvinyl chloride PVC tube (typically 4-foot long).
- Photoionization detector (PID) or other air monitoring instrumentation as required by the HASP.
- 4-mil-thick plastic sheeting or aluminum foil.
- Tape measure.
- Unified Soil Classification System (USCS) based on the Visual-Manual Procedures in ASTM Standards D 2487-00 and D 2488-00.
- 5035 sample containers with lids.
- Terra-cores™ or similar coring sampling device, if required.
- Sample labels.
- Stainless steel trowels, putty knives or similar soil working tool.
- Penetrometer (if available).
- Waterproof marking pens, such as the Staedtler Lumocolor.
- Coolers (with ice) for sample storage and shipment.

- Sample data forms/clip board.
- Decontamination supplies (Alconox™ [or similar detergent], brush, bucket).
- Nitrile gloves, or other specified chemical resistant gloves.
- Work gloves.
- Camera and film or disks.
- Blank soil borehole logs or a field-logging PDA.
- Personal safety gear (hard hat, steel-toed boots, ear plugs, safety glasses, etc.).

8.0 METHODS

8.1 Hollow-Stem Auger/Direct Push Sampling

Make sure that all equipment and meters have been calibrated to the equipment specifications and the results have been recorded in the field log.

The top five (5) feet of the boreholes will be cleared via air knife, vacuum excavation, ground penetrating radar, hand auger, tile probe or some combination of these methods.

Shallow soil boreholes are typically drilled with hollow-stem augers or geoprobe and sampled at the intervals specified in the work plans. Sampling shall be done in advance of the lead auger to minimize cross-contamination. Samples for laboratory analysis shall be taken with a continuous soil sampler. Standard blow counts shall be recorded for driving the sampler 6 and 12 inches (ASTM Method D 1586-99) if sampler is hammer driven.

Upon retrieval of the sample, the sample will placed on a clean surface (or lined with disposable aluminum foil or plastic sheeting) and will be screened with a PID for locating potential elevated PID readings. If applicable, a representative grab sample will be collected along with a headspace sample and placed into the appropriately labeled sample container. The sample containers shall be placed in self-sealing plastic or bubble bags in a cooler with ice or frozen ice packs for storage until they are delivered to the analytical laboratory.

The following method is to be used for headspace screening:

- The portion (for headspace screening) should be placed into an appropriately sized re-sealable Ziploc® or equivalent bag;
- Seal and label the bag with the borehole identification and the depth of the sample;
- Allow the bag to equilibrate for approximately ten (10) minutes; and
- Insert the probe tip of the PID into the bag. Obtain a measurement using the PID.

The remainder of the sample shall be logged in accordance with the USCS and recorded on the boring logs according to the following procedure:

1. As much information as possible is to be shown in the heading of each log. This includes, but is not limited to:

   - Project name and project identification number;
   - Identification of borehole;
   - Name of drilling company;
   - Make, model, type, and size of drilling and sampling equipment used;
   - Date and time of start and end of drilling
   - Name of geologist(s) logging boring;
   - End of boring depth; and,
   - Depth to water (if encountered).

2. Each log is to begin with a description of the surface, (i.e., native, paved with asphalt, paved with concrete, and such). If any concrete is cut to open the hole, the thickness will be noted.

3. Every foot will be accounted for, with no gaps. If an interval is not sampled it will be noted. If an attempt is made to sample an interval, but there is no recovery, it will be noted.

4. Complete construction details are to be detailed for each well on a standard well construction form. Construction details should include:

   - A description of the type and length of casing i.e., 20' of 2" inner diameter (ID) Schedule 40 PVC casing;
   - Length and depths of the top and bottom of the screened interval;
   - Screen slot size;
   - Depths of the top and bottom of the filter pack;
   - Filter pack materials and sand size;
   - Depths and types of bentonite seals;
   - Detail of the use of grout; and,
   - Detail of the surface completion (i.e., stick up, flush-mounted).

5. The number of bags of sand, bentonite, and grout used will be counted. These numbers will be compared daily with the driller's daily report.

Soil cuttings will be stockpiled on 4-mil thick plastic sheeting or drummed. The cuttings and other investigation-derived waste will be managed in accordance with the work plan or client-specific directives.

When sampling for volatile organic compounds (VOCs), use USEPA Method 5035. Method 5035 requires ample preservation in the field at the point of collection. The preservative used for the low concentration soil method (0.5 to 200 µg/kg) is sodium bisulfate and the preservative used for the medium/high concentration soil method (>200 µg/kg) is methanol. This field collection and preservation procedure is intended to

prevent loss of VOCs during sample transport, handling, and analysis. The holding time for VOC analysis is 14 days.

1. Use the lab provided plunger style sampler (T-handle, syringe with tool, or terra-core™ sampler) to collect a 5g soil sample.

2. Unscrew the lid of the lab provided pre-preserved sodium bisulfate volatile organic analysis (VOA) vials and inject the 5g soil sample.

3. Tightly seal the VOA vial.

4. Repeat this step with the second sodium bisulfate VOA vial.

5. Then, repeat with the methanol preserved VOA vial.

6. Collect a soil sample in the 4-ounce wide mouth glass jar provided by the lab.

7. Make sure sample containers are labeled and bagged in plastic or bubble bags.

8. Ice the samples.

8.2 Hand Auger Sampling

Shallow soil boreholes less than five (5) feet in depth can be collected using a hand auger. The auger will be advanced until the desired sampling depth is reached. The auger will be removed from the boring, the sample will be extracted from the hand auger and field screened (as appropriate), and representative grab samples will be collected and placed into the appropriate labeled sample container. Decontamination of the auger and extensions will occur after each sample.

Boreholes will be abandoned by backfilling with bentonite chips and hydrating with potable water.

8.3 Excavation

Excavations and test pits will be excavated using a backhoe provided by the subcontractor. The dimensions of individual excavations will vary depending on the strength and stability of the trench walls and the specific purpose of the trench. Excavations greater than four (4) feet deep will not be entered by any personnel unless shoring is performed or the sides are stepped back to the proper angle per OSHA requirements.

When starting an excavation, the backhoe operator will first remove the topsoil or cover (if any) and place it in a discrete mound at least five (5) feet from the edge of the excavation. The excavation will be continued in approximately 6-inch cuts with the backhoe using a horizontal scraping motion rather than a vertical scooping motion. If a visibly-stained or otherwise chemically-affected soil interval is encountered, the affected excavated soils will be placed on 4-mil thick plastic sheeting.

8.3.1 Excavation Sampling

Samples will be collected from the backhoe bucket using a stainless steel trowel or similar. The top layer of soil will be removed prior to collecting the sample. The soil will then be placed in the appropriately labeled sample container and placed inside a chilled cooler.

8.3.2 Excavation Backfilling

The soils will be replaced in the excavation at their original depths to the extent practicable so that the soil from the bottom of the trench will be placed on the bottom, and the topsoil will be replaced on the top. The backhoe will be used to backfill and compact the excavation.

Upon completion and subsequent backfilling of each excavation, four corners will be marked with a wooden stake for surveying. If appropriate, a fifth stake will be placed above the location where a soil sample was collected. The points may be surveyed, as needed.

8.4 Decontamination Methods

8.4.1 Sampling Equipment Decontamination

The following steps will be used to decontaminate sampling equipment:

- Ensure that the decontamination process has been carefully designed to be sure that the solutions used are appropriate for the chemicals of interest.
- Ensure that the decontamination area is properly constructed to keep contamination within the contamination reduction and exclusion zones.
- Ensure that the decontamination area is properly constructed to contain the rinse solutions and solids.
- Personnel will dress in suitable safety equipment to reduce personal exposure.
- Smaller equipment that will not be damaged by water will be placed in a wash bucket containing an Alconox™ (or equivalent) solution and scrubbed with a brush or clean cloth. Smaller equipment will be rinsed in water. Change rinse and detergent waters between boreholes, as needed.
- For larger drilling equipment the soil and/or other material will be scraped off with a flat-bladed scraper, and placed within a deconcontamination (decon) pad. The decon pad will be constructed in a predetermined location, and equipment shall be cleaned with a pressure washer using potable water. Care will be taken to adequately clean the insides of the hollow-stem augers, and cutter heads.
- Equipment that may be damaged by water will be carefully wiped clean using a

sponge and detergent water and rinsed in or wiped down with distilled water. Care will be taken to prevent any equipment damage.

Following decontamination, equipment will be placed in a clean area or on clean plastic sheeting to prevent contact with potentially contaminated soil.

Following decontamination, drilling equipment will be placed on the clean drill rig and moved to a clean area. If the equipment is not used immediately, it will be stored in the designated secure, clean area.

8.4.2 Excavation Decontamination

Decontamination protocols must be carefully designed and constructed to deal with the chemicals of interest and ensure that the rinse solutions and solids are contained within the contamination reduction zone.

The backhoe bucket will be decontaminated prior to excavating each excavation. The entire backhoe, bucket, and tires will be decontaminated at the conclusion of the trenching operation. Decontamination will involve using a steam cleaner with an Alconox™ solution or pressure washer and rinsing using a steam cleaner or pressure washer with potable water. Backhoe decontamination will take place at the decontamination area located adjacent to the maintenance building or at another appropriate location.

The sampling equipment will be decontaminated prior to collecting each sample. Decontamination will consist of washing the equipment with a scrub brush in a bucket with an Alconox™ solution (or equivalent) and rinsing the equipment in a bucket filled with tap water. The date and time of decontamination of the backhoe and sampling equipment will be recorded in the field book and/or data collection forms.

8.5 Sample Containers, Storage, and Holding Times

Refer to the Project Sampling and Analysis Plan (SAP) for project specific instructions on proper containers, storage of samples and allowable holding times.

9.0 QUALITY CONTROL CHECKS AND ACCEPTANCE CRITERIA

Refer to the QAPP and SAP for specific quality control checks and acceptance criteria.

10.0 DOCUMENTATION

A borehole log will be completed for each hollow-stem auger or direct-push borehole. The field notebook and/or data collection forms will contain the following information:

- Project name and number.
- Drilling company's name.
- Date drilling started and finished.
- Type of auger and size (ID & OD).

- Type of equipment for air monitoring (PID or FID).
- Air monitoring calibration and measurements.
- Well completion and graphic log.
- Driller's name.
- Geologist's or engineer's name.
- Type of drill rig.
- Borehole number.
- Surface elevation (if available).
- Stratigraphic description with depth.
- Classification of the soils according to the USCS.
- Water levels and light non-aqueous phase liquid levels, if applicable.
- Drilling observations.
- Map of borehole or monitoring well location.

In addition, proper documentation will include observance of the chain of custody procedures as described in the Project QAPP and SAP.

Additional information regarding field documentation for borehole logging for fine- and coarse-grained soils and rocks are provided in Stantec checklists ERPA-603 through ERPA-605.

ACCEPTANCE

Author/Originator

Peer Reviewer

Senior Reviewer

Environment Practice QA/QC Manager

1.0 PURPOSE & APPLICABILITY

The purpose of this document is to define the standard operating procedure (SOP) for the sampling of monitoring wells. The ultimate goal of the sampling program is to obtain samples that meet acceptable standards of accuracy, precision, comparability, representativeness and completeness. All steps that could affect tracking, documentation, or integrity of samples have been explained in sufficient detail to allow different sampling personnel to collect samples that are equally reliable and consistent.

This procedure provides descriptions of equipment, field procedures, sample containers, decontamination, documentation, storage, holding times, and field quality assurance/quality control (QA/QC) procedures necessary to collect water samples from groundwater monitoring wells.

This procedure may apply to all groundwater sampling of monitoring wells by Stantec personnel or their subcontractors.

While the QAPP is intended to be strictly followed, it must be recognized that field conditions may force some modifications to the SOP. Any modification to the procedure shall be approved by the Project Manager or Task Leader in advance. Where SOP modification is planned sufficiently in advance, regulatory agency concurrence will be sought prior to conducting the specific activity. When direct contact with regulatory agency staff is not possible, or unscheduled delays will result, such as during field activities, regulatory agency will be notified of deviations from the SOPs, in writing, as soon as possible after the occurrence.

2.0 DEFINITIONS

HASP	Health and Safety Plan
HCL	Hydrochloric Acid
OSHA	Occupational Safety and Health Administration
PID	Photoionization Detector
PPE	Personal Protective Equipment
PVC	Polyvinyl Chloride
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
SOP	Standard Operating Procedure
VOC	Volatile Organic Compound

3.0 HEALTH AND SAFETY CONSIDERATIONS

Refer to the site-specific HASP for health and safety considerations applicable to groundwater sampling.

Consideration of Health and Safety risks prior to performing this work is paramount. This risk review can be performed by making our generic Job Safety Analysis site specific in our site-specific Health and Safety Plan. Of course, there are many items that need to be considered. The following is just a short list of the items. Careful consideration of these items by the project team is essential, and the ultimate responsibility of the project manager.

- Traffic guidance and control. Even plans developed by outside traffic control contractors need to be carefully evaluated to make sure they are protective of our staff and contractors.
- Personal protective equipment (PPE) including high visibility traffic vest, gloves, appropriate clothing.
- Heat and cold stress.
- Biological hazards such as insects and spiders. Therefore appropriate clothing is required such as long-sleeved shirts and long pants.
- Bloodborne pathogens. Some of our sites may have syringes and other drug paraphernalia that must be avoided.
- Chemical exposure on sites with open contamination. Proper selection of respiratory protection is essential and an understanding of its limitation (i.e., negative pressure respiratory protection does not supply oxygen in an oxygen-deficient atmosphere). Staff should familiarize themselves with exposure limits for contaminants of concern.
- Use of air monitoring instrumentation will not likely be necessary. We must be careful to make sure that our instrumentation is appropriate for the airborne contaminants of interest and that our staff understands the limitations of the instrumentation. Staff must also understand and perform calibration including zeroing with zero gas cylinders and appropriate other calibration gases.
- Decontamination of equipment and personnel must be properly designed and constructed to be sure that contamination is kept within the boundaries of the exclusion zone.
- Noise and proper use of hearing protection devices such as ear plugs and/or muffs.
- Emergency action plan must be carefully coordinated in advance between Stantec, our subcontractors, the client and emergency responders.
- Ergonomics should be considered when setting up equipment. Ensure that staff does not lift more than 50 lbs. alone.

All of these risks and others must be discussed with our subcontractors, if applicable, and clients to be sure they are properly addressed. Once the issues have been addressed at a project management level, they must be communicated to the staff actually performing the work. Details of procedures, instrument measurements, and other activities must be recorded in the field log and/or on data collection forms.

4.0 QUALITY ASSURANCE PLANNING CONSIDERATIONS

Sampling shall be done by personnel familiar with the common sources of random and systematic error so intelligent decisions can be made in the field. Some of the common phenomena which may degrade sample quality are listed below:

- **Volatilization.** This occurs when the sample is in contact with air for an extended time. It is typically a problem when water is either sitting in the well or when air pockets exist at the top of the water container. Prompt sampling after well evacuation, proper sampling order (i.e., fill VOC sample containers first), and tight capping of bottles immediately after filling will minimize these errors.

- **Adsorption/desorption.** This is the gain or loss of chemicals through exchange across surfaces. It may occur when the sample comes in contact with large surface areas such as bailers or tubing. Thorough decontamination of bailers and/or tubing, or using disposible bailers and/or tubing and probes along with expedient sampling after well purging minimizes sorption effects.

- **Chemical reaction.** Dissolved chemical constituents may change due to reactions such as oxidation, hydrolysis, precipitation, etc. Proper preservation and adherence to holding times minimize these reactions.

- **Biodegradation.** Virtually all groundwater contains bacteria, some of which may be capable of altering the composition of contaminants. Proper preservation and adherence to holding time will reduce this effect.

- **Sample contamination.** This is the most common source of errors and can result from several factors, including incomplete decontamination, contact with other samples, and contact with the atmosphere. Careful attention to decontamination, handling, and container sealing minimizes sample contamination.

5.0 RESPONSIBILITIES

The Project Manager or Task Leader will be responsible for assigning project staff to complete water sampling activities. The Task Leader will also be responsible for assuring that this and any other appropriate procedures are followed by all project personnel.

The project staff assigned to the water sampling task will be responsible for completing their tasks according to this and other appropriate procedures. All staff will be responsible for reporting deviations from the procedure or nonconformance to the Task Leader, Project Manager, or Project QA/QC Officer.

6.0 TRAINING/QUALIFICATIONS

Only qualified personnel shall be allowed to perform water sampling. At a minimum, Stantec employees qualified to perform water sampling will be required to have:

- Read this SOP.

- Indicated to the Task Leader that all procedures contained in this SOP are understood.

- Completed the OSHA 40-hour training course and/or 8-hour refresher course, as appropriate.

- Previously performed water sampling in a manner generally consistent with the procedures described in this SOP.

Stantec employees who do not have previous experience sampling ground water will be trained on site by a qualified Stantec employee and supervised directly by that employee until they have demonstrated an ability to perform the procedures.

The Project Manager shall document personnel qualifications related to this procedure in the project QA files.

7.0 REQUIRED MATERIALS

Dedicated evacuation/sampling equipment will be used whenever possible and stored at the well or a designated location on site. Sample bottles for volatile and semivolatile organic compounds, general mineral, and metals samples will be obtained from the analytical laboratory. Extra sample containers will be obtained in case of breakage or other problems. Trip blanks will also be obtained from the analytical laboratory.

A typical well evacuation equipment list:

- Water level probe or fiberglass tape.
- Bailers:
  2-inch-diameter well
  -- 1.66-inch O.D. x 3-foot PVC bailer, or
  -- 1.66-inch O.D. x 5-foot PVC bailer, or
  -- 1.66-inch O.D. x 3-foot disposable polyethylene bailer.
- Pumps:
  -- Grundfos, bladder, or peristaltic type submersible pump.
- Teflon-coated bailing wire rope or disposable polyethylene cord.
- Electric generator.
- YSI meter.
- Personal protective equipment, including nitrile (or other material depending upon the nature of the chemicals encountered) or powderless surgical gloves and safety glasses. Tough work gloves may also be required for moving around equipment before or after the sampling itself. Other PPE include traffic vest, steel-toed safety shoes, hearing protection devices, long-sleeved shirt and long pants, and possibly a respirator if there is volatilization of chemicals, etc.
- Groundwater sample collection data forms.
- Photoionization Detector (PID).
- Data recording sheets/electronic storage device (PDA).

- Field notebook.

A typical well sampling equipment list:

- Sampling bailers (double check valve, bottom discharge).
- Teflon-coated bailing wire rope or disposable polypropylene cord.
- Bladder pump Teflon and/or stainless steel construction equipped with Teflon and/or Teflon-lined control and discharge tubing.
- Personal protective equipment, including nitrile (or other material depending upon the nature of the chemicals we expect to encounter) or powderless surgical gloves and safety glasses. Tough work gloves may also be required for moving around equipment before or after the sampling itself. Other PPE include traffic vest, steel-toed safety shoes, hearing protection devices, long-sleeved shirt and long pants, and possibly a respirator if there is volatilization of chemicals, etc.
- Ground Water Sample Collection Data Forms.
- Chain-of-custody forms.
- Labels.
- Cooler.
- Ice or frozen ice packs.
- Field notebook.

Proposed equipment for sample filtration, if filtration is needed:

- Two clean containers, approximately one (1) liter in size
- Organic-free deionized water
- One Peristaltic filtration pump
- In-line plate filter
- Filter membranes--0.45 µ pore size
- A 1:1 nitric acid/purified water solution or 0.1 normal HCL for decontamination of filtering glassware

Equipment used during decontamination:

- Alconox™ detergent (or equivalent) or other solution that will neutralize the chemicals encountered.

- Organic-free deionized water, or distilled water.
- Containers, brushes, paper towels.
- Personal protective equipment, including nitrile (or other material depending upon the nature of the chemicals we expect to encounter) or powderless surgical gloves and safety glasses. Tough work gloves may also be required for moving around equipment before or after the sampling itself. Other PPE include traffic vest, steel-toed safety shoes, hearing protection devices, long-sleeved shirt and long pants, and possibly a respirator if there is volatilization of chemicals, etc.

8.0 METHODS

This section describes the sequence of events to follow for sample collection in the field.

8.1 Equipment Decontamination Method

The decontamination protocol is essential to the quality of the sampling procedure as well as essential to ensuring that chemicals stay at the project site and are not tracked or carried elsewhere. The decontamination procedure should be designed and constructed to work on the chemicals of interest and contain the rinsate and solids within the contamination reduction zone.

Before sampling begins any non-dedicated or non-disposible equipment, well probes, pumps, and pump hoses shall be decontaminated.

Decontamination will be performed on all non-dedicated sampling equipment that may contact potentially contaminated water, including water level probes, fiberglass tapes, Teflon bailers, and non-dedicated pump hoses. Clean nitrile gloves (or other appropriate material depending upon the chemicals involved) or powderless surgical gloves are to be worn during decontamination.

Each piece of sampling equipment will also be decontaminated between each well. The decontamination procedure for most equipment will be as follows:

- Disassemble equipment (i.e., bladder pump).
- Wash equipment in an Alconox™ (or equivalent) and water solution using a brush or clean cloth to ensure removal of all contaminants.
- Rinse equipment in fresh tap water. Re-rinse with de-ionized water or distilled water.
- Dry equipment with paper towel and place in clean place, if appropriate.

The effectiveness of these decontamination procedures will be verified by vigorous QA/QC protocols, including blanks, duplicates, and spikes.

The rinsate water will be sufficient to prevent the Alconox™ solution (or equivalent) from entering the well. If a submersible pump is used to evacuate wells, the pump shall be decontaminated prior to use in each well. The procedure consists of immersing the pump, discharge tubing, and drop wire in an Alconox™ solution (or equivalent) and circulating the solution through the system. After washing, the circulating procedure will be repeated three (3) times with clean tap water. Samples of the tap water used as rinsate for the jet pump and/or submersible pump will be submitted for analysis. The analyses will be the same test methods used as water samples collected from the wells on site.

In addition to the above procedures for the jet and submersible pumps and other pieces of equipment, each of the decontamination solutions will be replaced with clean solution between each decontamination operation (i.e., between each well).

8.2 Well Evacuation Method

The purpose of well purging is to remove stagnant water from the well and obtain fresh water from the geologic material screened by the well.

Static water levels shall be measured for each well immediately before evacuating the well for sampling. This procedure shall be accomplished with a measuring probe or by the use of a chalked fiberglass tape. Water levels will be measured from the elevation reference point marked on the PVC inner casing. Regardless of the tools used, the measuring process will be repeated until consecutive water level measurements agree to within $\pm$ 0.01 foot. If floating product is historically known to occur in a well or if there is reason to believe there will be floating product in a new well, an interface probe will be used to measure the depth to water and the thickness of the floating material.

For wells that have been sampled previously, the purging method will be determined by the historic yield of the well. For new wells, the purging method will be based on past experience with wells screened in similar geologic materials.

If a pump is used, the type will be dependent upon the depth of the well. Typically, shallow high yield wells will be purged with a jet pump, and deep high yield wells will be purged with a submersible pump.

Purge water will be containerized and labled for approriate disposal.

The following sampling procedure is performed at each well:

- Note well condition, and any unusual conditions of the area immediately surrounding the well.
- Remove well cover and unlock cap.
- If necessary, evacuate any standing water within well box prior to removing inner well caps.
- When inner well caps are removed, perform head space analysis using a PID (as required).

- Measure and record depth to static water level from measuring point on PVC inner well casing. Repeat the measurement process until values agree within ± 0.01 feet. Indicate time of measurement.

- Record total depth of well (measured during water level measurement process) and use this depth to calculate volume of water in well (casing volume) in feet (of water) and gallons.

- When using a pump for evacuation, the pump intake will be initially placed in the center of the well screen.

8.3 Obtaining Water Samples

Groundwater samples shall be collected as soon as the water parameters have stabilized.

Sampling shall be accomplished with either a dedicated PVC bailer, a Teflon sampling bailer, a disposable bailer, or other sampling equipment. Bailers will be lowered into the well using either a Teflon-coated wire rope or disposable (one time use) polypropylene cord. Clean nitrile or powderless surgical gloves shall be worn by sampling personnel and changed often during all sampling procedures. Gloves shall be changed between purging and sampling

The following sampling procedure is to be used at each well:

- Assemble decontaminated sampling equipment.

- Don clean nitrile or powderless surgical gloves immediately before obtaining sample.

- Label sample containers.

- Obtain sample from well using a Teflon bailer, a disposable bailer, a dedicated PVC bailer, or directly from the pump tubing or permanent sampling apparatus. Care will be taken when using a bailer to minimize degassing or contamination of the sample, therefore the bailer will be submerged and withdrawn slowly to avoid splashing. The bailer will not be placed on the ground. The bailer will be lowered to the screened interval before sampling unless a nonaqueous floating layer is present, in which case the bailer will be submerged to just below the water table. Similar procedures apply for the use of a bladder pump.

- Transfer sample water directly into pre-preserved sample bottles provided by the laboratory, maintaining a slow linear flow with as little aeration as possible. The individual sample bottles will be filled and immediately capped in the order given below or as required by the analytical protocol:

    - Volatile organic compounds (VOCs)
    - Semivolatile organic compounds
    - Priority Pollutant Metals
    - General Minerals

- After each sample is collected, place the bottles in self-sealing plastic or bubble bags, seal the bags, and immediately place the bags in a chilled cooler with ice or frozen ice packs.

- Water samples collected with a bladder pump for metal and general mineral analyses will be filtered in the field with an in-line filter attached to the pump discharge hose if needed. These samples can be analyzed for dissolved metal content. Samples collected with a sampling bailer for metal analysis will be analyzed for total metal content. The turbidity of such samples will be recorded in the field notebook and/or data collection form to allow a qualitative evaluation of the degree to which metal concentrations could be associated with suspended matter.

- Record sample number, time of sampling, location, and sampler on the Ground Water Sample Collection Data Form.

- Replace well cap, close well cover, and lock well.

- Complete chain-of-custody form for transportation of samples to lab.

- Hand deliver or ship samples to the lab on the same day they are collected, or as soon afterwards as possible.

8.4 Sample Filtration Method

The following filtering procedures shall be used on samples collected for filtered metal and general mineral analyses using a bladder pump. Clean nitrile or powderless surgical gloves will be worn during this procedure.

- Connect in-line filter capsule (0.45 micron pore size) to bladder pump tubing.

- Pre-rinse the filter (2 to 3 gallons for filters with a 750 cm^2 effective filtration area), with organic-free deionized water.

- Fill sample bottle containing necessary preservatives.

- Store filtered samples in a chilled cooler with ice or frozen ice packs.

- Discard filter.

If, for some reason, filtration of bailer-collected samples is desired or appropriate, the following filtration procedure will be followed. Clean nitrile or powderless surgical gloves will be worn during this procedure.

- Place a new 0.45 filter membrane on the filter plate and assemble the (decontaminated) filter holder.

- Transfer information from sample label on the sample collected in the field (these samples will have been collected in sample bottles without preservatives) to new sample bottle (containing preservative, if appropriate).

- Place filtration tube in the sample bottle containing the unfiltered solution.
- Place new sample bottle (containing necessary preservatives) under filtering unit.
- Turn on pump and filter sample at less than 25 psi.
- Store filtered samples in chilled cooler with ice or frozen ice packs.
- Remove and dispose of used filter membrane.
- Rinse filtration plate and all parts of filtering apparatus that contacted the water sample with deionized water.
- Decontaminate any filtering glassware in an Alconox™ (or equivalent) solution, followed by rinses with tap water, a 1:1 nitric acid/purified water solution or 0.1 normal HCl, and finally organic-free deionized water.

8.5 Decontamination Methods

The following steps will be used to decontaminate sampling equipment:

- Ensure that the decontamination process has been carefully designed so that the solutions used are appropriate for the chemicals of concern.
- Personnel will don appropriate safety equipment to reduce personal exposure.
- Equipment that will not be damaged by water will be placed in a wash tub containing an Alconox™ (or equivalent) solution and scrubbed with a brush or clean cloth. Equipment will then be rinsed in a second wash tub.
- Equipment that may be damaged by water will be carefully wiped clean using a sponge and detergent water and wiped with organic-free deionized water. Care will be taken to prevent any equipment damage.

Following decontamination, equipment will be placed in a clean area or on clean plastic sheeting to prevent possible contamination. Single use equipment and consumables will be discarded in an appropriate manner.

8.6 Sample Containers, Storage, and Holding Times

Refer to the Project SAP for project specific instructions on proper containers, storage of samples and allowable holding times.

9.0 QUALITY CONTROL CHECKS AND ACCEPTANCE CRITERIA

Refer to the Quality Assurance Project Plan for specific quality control checks and acceptance criteria.

Outline quality control checking procedures, including frequency requirements and acceptance criteria. Acceptance criteria may take the form of an illustration such as a chart of acceptable results with tolerances, or other appropriate forms.

10.0 DOCUMENTATION

A record will be maintained during the purging procedure that will contain, at a minimum:

- Initial depth to water
- Volume of water removed
- Purging method
- Physical parameters of the purged water
- How purge water was contained (drum, tank, bucket, etc.)

The data shall be recorded on a Ground Water Sample Collection Data Form for each well that is evacuated and sampled.

Sampling information in the field book should contain, at a minimum, the following:

- Sample name, location, time, sampler, analysis
- Blind duplicates shall be noted on field notes (not chain-of-custody)
- Volume of water evacuated
- Time of sample collection
- Number of samples collected
- Sample identification numbers
- Preservation and storage of samples
- Filtration performed, if any
- Record of any QC samples from site
- Any irregularities or problems that may have a bearing on sampling quality
- Type of sampling equipment

In addition, proper documentation will include observance of the chain of custody procedures as described in the Project QAPP and SAP.

ACCEPTANCE

Author/Originator

Peer Reviewer

Senior Reviewer

Environment Practice QA/QC Manager