



Rolls-Royce

Rolls-Royce Engine Services-Oakland Inc.

7200 Earhart Road
Oakland, California 94621-4504

Tel: (510) 613-1000

May 20, 2013

RECEIVED

By Alameda County Environmental Health at 2:07 pm, May 23, 2013

Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: **Rolls-Royce Engine Services Test Facility**
6701 Old Earhart Road
Oakland, California
Alameda County Site #RO0002606

I have reviewed the attached routine groundwater monitoring report dated May 17, 2013.

I agree with the conclusions and recommendation presented in the referenced report. The information in this report is accurate to the best of my knowledge. This report was prepared by Gettler-Ryan Incorporated, whose assistance and advice I have relied upon.

I declare under penalty of perjury that the foregoing is true and correct.

Sincerely,

Dave Goldberg
Facilities HS&E Specialist



May 17, 2013

Mr. Keith Nowell
Alameda County Environmental Health Department
1131 Harbor Bay Parkway, Ste. 250
Alameda, California 94502

**Subject: First Semi-Annual 2013 Event
Groundwater Monitoring and Sampling Report
Rolls-Royce Engine Services Test Facility
6701 Old Earhart Road, Oakland, California
Alameda County Site #RO0002606**

Mr. Nowell,

On behalf of Rolls-Royce Engine Services-Oakland Inc. (R-R), Gettler-Ryan Inc. (GR) has prepared this First Semi-Annual 2013 Event, Groundwater Monitoring and Sampling Report for the site referenced above. This report describes the field and analytical methods, provides a summary of groundwater monitoring results, and presents conclusions and recommendations regarding groundwater conditions at the site.

SITE LOCATION AND DESCRIPTION

The subject site is located at 6701 Old Earhart Road, adjacent to the Metropolitan Oakland International Airport (MOIA)-North Field, Oakland, California (Figure 1). Topography in the vicinity of the subject site is relatively flat at an average elevation of approximately 7.5 feet above mean sea level. The closest surface water is within the tidal wetlands bordering the site to the east.

Pertinent site features consist of six engine test cells with auxiliary structures (sheds, pumphouse, waste water sumps, aboveground oil/water separator, control buildings, gas conditioning facility, air receivers, cooling towers, flare stack, etc), one 30,000-gallon aboveground liquefied petroleum fuel tank, one 10,000-gallon jet A fuel underground storage tank (UST) and two paired 8,000-gallon jet A fuel USTs. Pertinent site features and the location of the USTs are shown on Figure 2.

For site background and previous environmental investigation, please refer to GR report No. 25-948218.07, *Well Installation Report*, dated January 11, 2008.

GROUNDWATER MONITORING

On March 25, 2013, GR personnel conducted semi-annual groundwater monitoring of nineteen wells (MW-1 through MW-15, MW-17, MW-18, NPORD MW-3 and NPORD MW-4). Work at the site included measuring static groundwater levels, evaluating groundwater in the wells for the presence of petroleum hydrocarbons, and purging and sampling the wells for laboratory analysis. Groundwater monitoring and sampling were performed in accordance with GR Field Methods and Procedures, Groundwater Sampling (attached).

On March 25, 2013, GR collected depth to groundwater measurements in nineteen wells (MW-1 through MW-15, MW-17, MW-18, NPORD MW-3 and NPORD MW-4) and checked groundwater for the presence of Separate-Phase Hydrocarbons (SPH). Approximately 0.15 foot of SPH were observed in well MW-18. Approximately 0.15 gallon of SPH were bailed from well MW-18 and stored onsite in a 55-gallon DOT approved drum pending disposal. Water level data, groundwater elevations, and SPH thicknesses are presented in attached Table 1. SPH thicknesses and approximate SPH volumes purged are summarized in Table 3. Field data sheets for this event are attached.

Rolls-Royce personnel have been periodically removing SPH present in well MW-18 through the use of absorbent socks. SPH removal logs for the most recent and historic events are attached to this report.

Groundwater monitoring wells MW-1 through MW-15, MW-17, MW-18, NPORD MW-3 and NPORD MW-4 were purged and sampled on the same date they were monitored. Groundwater samples were submitted under chain-of-custody protocol to Kiff Analytical (NELAP #08263CA) of Davis, California. A copy of the laboratory analytical reports and chain-of-custody documents are attached. Purge water generated from the sampling activities was stored onsite in 55-gallon DOT approved drums pending disposal. GR understands that the disposal of water generated will be handled by R-R.

ANALYTICAL METHODS

Groundwater samples were analyzed for Total Petroleum Hydrocarbons as gasoline (TPHg), Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX), Methyl-tert Butyl Ether (MtBE), and naphthalene by EPA Method 8260B, and for Total Petroleum Hydrocarbons as diesel (TPHd), Total Petroleum Hydrocarbons as motor oil (TPHmo), and Total Petroleum Hydrocarbons as jet fuel (TPHjf) by modified EPA Method 8015. Current and historic groundwater analytical results are presented in Tables 1 and 2.

RESULTS

Groundwater Gradient

On March 25, 2013, the groundwater flow direction was to the southeast at hydraulic gradients of 0.02 to 0.03 ft/ft. A Potentiometric Map is presented as Figure 3.

Analytical Results

TPHd was detected in groundwater samples collected from ten wells at concentrations ranging from 57 parts per billion (ppb) in well NPORD MW-4 to 35,000 ppb in well MW-18. Concentrations of TPHmo were detected in eight wells at levels ranging from 170 ppb in well MW-4 to 39,000 ppb in well MW-18. TPHjf was detected in eighteen wells at concentrations ranging from 59 ppb in well MW-1 to 61,000 ppb in well MW-18.

TPHg was detected in wells MW-13 and MW-18 at concentrations of 170 ppb and 740 ppb, respectively. Concentrations of TPHg were reported below the laboratory method detection limits in water samples collected from the remaining wells.

BTEX constituents were reported as below the laboratory method detection limits in all of the wells except for 1.7 ppb of total Xylenes detected in well MW-18. MtBE was detected in wells MW-13, MW-14 and MW-18 at concentrations of 1.4 ppb, 1.1 ppb and 2.2 ppb, respectively. Naphthalene reported as below the laboratory method detection limits in all of the wells.

TPHg, TPHd, TPHmo, TPHjf, BTEX, MtBE and naphthalene were reported below the laboratory method detection limits well NPORD MW-3. TPHg, TPHd, TPHmo and TPHjf concentrations are presented on Figure 4.

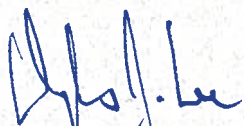
CONCLUSIONS AND RECOMMENDATIONS

Based on the results of this groundwater monitoring and sampling event, GR concludes and recommends the following:

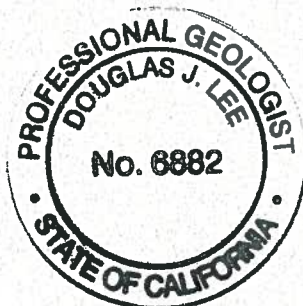
- Concentrations of TPHd, TPHmo and TPHjf in groundwater samples were generally consistent with those observed during the previous monitoring and sampling events;
- Concentrations of TPHg were limited to the vicinity of wells MW-13 and MW-18;
- Separate-Phase Hydrocarbons continue to be limited to the vicinity MW-18;
- Petroleum hydrocarbon concentrations were very low to not detected in wells located along the northeast edge of the site; and
- GR recommends the continuation of the current semi-annual monitoring and sampling program for the site. SPH will continue to be removed from well MW-18 on a periodic basis.

If you have any questions about this report, please feel free to contact our Dublin office at (925) 551-7555.

Sincerely,
Gettler-Ryan Inc.



Douglas J. Lee
Project Manager, P.G. No. 6882



Attachments: Table 1, Groundwater Monitoring Results
Table 2, Field Measurements and Groundwater Analytical Results
Table 3, SPH Thickness and Volumes Purged - MW-18
Figure 1, Vicinity Map
Figure 2, Site Plan
Figure 3, Potentiometric Map
Figure 4, Concentration Map
GR Field Methods and Procedures
Field Data Sheets
SPH Removal Logs
Laboratory Analytical Report and Chain of Custody

CC: Mr. Dave Goldberg, Rolls-Royce Engine Services-Oakland Inc
Ms. Colleen Liang, Port of Oakland

Table 1
Groundwater Monitoring Data and Analytical Results
Rolls-Royce Engine Services Test Facility
6701 Old Earhart Road
Oakland, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	SPHT (ft.)	GWE (msl)	TPH-G (µg/L)	TPH-D ¹ (µg/L)	TPH-MO (µg/L)	TPH-JE (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	Napthalene (µg/L)	SVOC (µg/L)
MW-1															
10/03/07	7.17	3.04	0.00	4.13	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/14/08	7.17	3.02	0.00	4.15	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
06/26/08	7.17	3.38	0.00	3.79	<50	<50	<100	51 ⁷	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/25/08	7.17	3.03	0.00	4.14	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
12/19/08	7.17	2.82	0.00	4.35	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/26/09	7.17	3.30	0.00	3.87	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
06/24/09	7.17	2.57	0.00	4.60	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/24/09	7.17	3.08	0.00	4.09	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
01/15/10	7.17	2.21	0.00	4.96	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/09/10	7.17	2.95	0.00	4.22	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/21/11	7.17	2.31	0.00	4.86	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/02/11	7.17	2.94	0.00	4.23	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
04/17/12	7.17	3.00	0.00	4.17	<50	<50	280 ²³	72 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/18/12	7.17	3.15	0.00	4.02	<50	<50	160	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/25/13	7.17	3.30	0.00	3.87	<50	<50	<100	59	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
MW-2															
10/03/07	7.03	2.80	0.00	4.23	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/14/08	7.03	2.94	0.00	4.09	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
06/26/08	7.03	3.32	0.00	3.71	<50	<50	<100	97 ⁷	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/25/08	7.03	2.75	0.00	4.28	<50	<50	<100	410 ¹⁶	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
12/19/08	7.03	2.54	0.00	4.49	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/26/09	7.03	3.15	0.00	3.88	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
06/24/09	7.03	2.52	0.00	4.51	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/24/09	7.03	2.87	0.00	4.16	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
01/15/10	7.03	2.15	0.00	4.88	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/09/10	7.03	2.79	0.00	4.24	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/21/11	7.03	1.92	0.00	5.11	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/02/11	7.03	2.70	0.00	4.33	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
04/17/12	7.03	2.41	0.00	4.62	<50	62 ⁶	340	170 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/18/12	7.03	3.03	0.00	4.00	<50	<50	190	51 ⁹	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/25/13	7.03	3.21	0.00	3.82	<50	<50	<100	60	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA

Table 1
Groundwater Monitoring Data and Analytical Results
Rolls-Royce Engine Services Test Facility
6701 Old Earhart Road
Oakland, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	SPHT (ft.)	GWE (msl)	TPH-G (µg/L)	TPH-D ¹ (µg/L)	TPH-MO (µg/L)	TPH-JE (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	Napthalene (µg/L)	SVOC (µg/L)
MW-3															
10/02/07	6.73	4.56	0.00	2.17	<50	<50	<100	410	<0.50	<0.50	<0.50	<0.50	1.6 ⁴	<0.50	NA
03/14/08	6.73	3.98	0.00	2.75	<50	<50	<100	120 ⁹	<0.50	<0.50	<0.50	<0.50	0.99	<0.50	NA
06/26/08	6.73	4.21	0.00	2.52	<50	<50	<100	610 ⁷	<0.50	1.7	<0.50	<0.50	0.93	<0.50	NA
09/25/08	6.73	4.25	0.00	2.48	<50	<50	<100	650 ¹⁶	<0.50	<0.50	<0.50	<0.50	1.2	<0.50	NA
12/19/08	6.73	4.25	0.00	2.48	<50	<50	<100	520 ¹⁸	<0.50	<0.50	<0.50	<0.50	1.2	<0.50	NA
03/26/09	6.73	3.82	0.00	2.91	<50	<50	<100	400 ¹⁸	<0.50	<0.50	<0.50	<0.50	0.69	<0.50	NA
06/24/09	6.73	4.21	0.00	2.52	<50	<50	<100	460	<0.50	<0.50	<0.50	<0.50	0.80	<0.50	NA
09/24/09	6.73	4.33	0.00	2.40	<50	<50	<100	400	<0.50	<0.50	<0.50	<0.50	0.70	<0.50	NA
01/15/10	6.73	3.92	0.00	2.81	<50	<50	110	420 ¹⁸	<0.50	<0.50	<0.50	<0.50	0.70	<0.50	NA
09/09/10	6.73	4.52	0.00	2.21	<50	<50	<100	450	<0.50	<0.50	<0.50	<0.50	0.62	<0.50	NA
03/21/11	6.73	3.20	0.00	3.53	<50	<50	500	400	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/02/11	6.73	4.48	0.00	2.25	<50	70	340	590 ¹⁸	<0.50	<0.50	<0.50	<0.50	0.68	<0.50	NA
04/17/12	6.73	3.66	0.00	3.07	<50	56 ⁶	870	680 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/18/12	6.73	4.54	0.00	2.19	<50	<50	120	470	<0.50	<0.50	<0.50	<0.50	0.62	<0.50	NA
03/25/13	6.73	4.35	0.00	2.38	<50	<50	<100	760	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
MW-4															
10/2/07 ⁴	9.79	5.81	0.00	3.98	<50	86	<100	280	<0.50	0.63	<0.50	<0.50	<0.50	<0.50	NA
03/14/08	9.79	5.82	0.00	3.97	<50	3,300	2,400	3,400 ⁷	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
06/26/08	9.79	6.08	0.00	3.71	<50	2,300	1,900	2,700 ⁷	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/25/08	9.79	5.98	0.00	3.81	<50	1,600	1,400	2,100 ¹⁶	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
12/19/08	9.79	5.93	0.00	3.86	<50	<50 ¹⁹	<100 ¹⁹	440 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/26/09	9.79	5.65	0.00	4.14	<50	720	550	1,000 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
06/24/09	9.79	5.72	0.00	4.07	<50	<50	<100	480 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/24/09	9.79	5.85	0.00	3.94	<50	1,300	1,100	1,700 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
01/15/10	9.79	4.86	0.00	4.93	<50	210	280	580 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10 - <50 ^{21,22}
09/09/10	9.79	5.75	0.00	4.04	<50	380 ⁶	510	680 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/21/11	9.79	4.95	0.00	4.84	<50	<50	<100	220	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/02/11	9.79	5.76	0.00	4.03	<50	60	<100	490 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
04/17/12	9.79	4.98	0.00	4.81	<50	240 ⁶	920	1,000 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/18/12	9.79	5.92	0.00	3.87	<50	200 ⁶	600	780 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/25/13	9.79	5.90	0.00	3.89	<50	180	170	640	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA

Table 1
Groundwater Monitoring Data and Analytical Results
Rolls-Royce Engine Services Test Facility
6701 Old Earhart Road
Oakland, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	SPHT (ft.)	GWE (msl)	TPH-G (µg/L)	TPH-D ¹ (µg/L)	TPH-MO (µg/L)	TPH-JE (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	Napthalene (µg/L)	SVOC (µg/L)
MW-5															
10/02/07	8.35	4.75	0.00	3.60	<50	5,600	11,000	5,300	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/14/08	8.35	4.40	0.00	3.95	<50	1,200 ⁶	1,700	1,100 ⁷	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
06/26/08	8.35	4.68	0.00	3.67	<50	1,400 ⁶	3,200	2,000 ⁷	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/25/08	8.35	4.52	0.00	3.83	<50	670 ⁶	1,200	940 ¹⁶	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
12/19/08	8.35	4.43	0.00	3.92	<50	2,100 ⁶	4,100	1,900 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/26/09	8.35	4.25	0.00	4.10	<50	2,400 ⁶	5,500	2,600 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
06/24/09	8.35	4.38	0.00	3.97	<50	1,300 ⁶	2,700	990 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/24/09	8.35	4.47	0.00	3.88	<50	1,400 ⁶	3,000	1,400 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
01/15/10	8.35	3.47	0.00	4.88	<50	450 ⁶	1,800	870 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/09/10	8.35	4.34	0.00	4.01	<50	890 ⁶	2,200	600 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/21/11	8.35	3.59	0.00	4.76	<50	670 ⁶	1,600	460 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/02/11	8.35	4.39	0.00	3.96	<50	310 ⁶	760	450 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
04/17/12	8.35	3.88	0.00	4.47	<50	450 ⁶	960	1,500 ¹⁸	<0.50	0.57	<0.50	<0.50	<0.50	<0.50	NA
09/18/12	8.35	4.54	0.00	3.81	<50	190 ⁶	470	470 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/25/13	8.35	4.58	0.00	3.77	<50	510⁶	1,200	680	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
MW-6															
10/02/07	9.51	5.90	0.00	3.61	<50	3,000 ⁶	7,700	2,500 ⁷	<0.50	<0.50	0.86	1.1	<0.50	0.53	NA
03/14/08	9.51	5.55	0.00	3.96	<50	3,600 ¹⁰	7,600	2,800 ⁷	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
06/26/08	9.51	5.80	0.00	3.71	<50	3,200 ¹⁰	9,400	3,200 ⁷	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/25/08	9.51	5.69	0.00	3.82	<50	3,500 ¹⁰	8,800	3,800 ¹⁶	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
12/19/08	9.51	5.43	0.00	4.08	<50	1,500 ¹⁰	5,500	1,200 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/26/09	9.51	5.38	0.00	4.13	<50	2,400 ⁶	6,800	1,800 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
06/24/09	9.51	5.46	0.00	4.05	<50	490 ⁶	1,600	450 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/24/09	9.51	5.60	0.00	3.91	<50	1,100 ¹⁰	3,400	860 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
01/15/10	9.51	4.57	0.00	4.94	<50	450 ⁶	2,700	790 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10 - <50 ^{21,22}
09/09/10	9.51	5.45	0.00	4.06	<50	620 ⁶	2,800	370 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/21/11	9.51	4.68	0.00	4.83	<50	<50	200	100 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/02/11	9.51	5.50	0.00	4.01	<50	310 ⁶	970	260 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
04/17/12	9.51	5.25	0.00	4.26	<50	62 ¹	130 ²³	650 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/18/12	9.51	5.64	0.00	3.87	<50	400 ⁶	1,300	500 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/25/13	9.51	5.64	0.00	3.87	<50	290⁶	870	620	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA

Table 1
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Rolls-Royce Engine Services Test Facility
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Oakland, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	SPHT (ft.)	GWE (msl)	TPH-G (µg/L)	TPH-D ¹ (µg/L)	TPH-MO (µg/L)	TPH-JE (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	Napthalene (µg/L)	SVOC (µg/L)
MW-7															
10/02/07	9.23	5.68	0.00	3.55	<50	12,000 ⁶	34,000	9,100 ⁷	<0.50	<0.50	<0.50	<0.50	<0.50	0.76	NA
03/14/08	9.23	5.32	0.00	3.91	<50	7,900 ⁶	20,000	5,500 ¹¹	<0.50	<0.50	<0.50	<0.50	<0.50	3.5	NA
06/26/08	9.23	5.56	0.00	3.67	<50	3,300 ⁶	10,000	3,300 ⁷	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/25/08	9.23	5.46	0.00	3.77	<50	5,300 ¹⁰	13,000	6,000 ¹⁶	<0.50	<0.50	<0.50	<0.50	<0.50	0.98	NA
12/19/08	9.23	5.38	0.00	3.85	<50	<50 ¹⁹	<100 ¹⁹	350 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/26/09	9.23	5.11	0.00	4.12	<50	710 ⁶	2,300	790 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
06/24/09	9.23	5.22	0.00	4.01	<50	<50	<100	390	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/24/09	9.23	5.38	0.00	3.85	<50	950 ⁶	2,600	980 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
01/15/10	9.23	4.38	0.00	4.85	<50	910 ⁶	4,900	1,200 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10 - <50 ^{21,22}
09/09/10	9.23	5.25	0.00	3.98	<50	1,800 ⁶	6,800	850 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/21/11	9.23	4.49	0.00	4.74	<50	<50	160	240 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/02/11	9.23	5.28	0.00	3.95	<50	2,100 ⁶	6,200	1,200 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
04/17/12	9.23	4.78	0.00	4.45	<50	810 ⁶	2,600	2,200 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/18/12	9.23	5.31	0.00	3.92	<50	510 ⁶	1,700	700 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/25/13	9.23	5.48	0.00	3.75	<50	1,100⁶	3,900	1,800	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
MW-8															
09/14/07	8.25	4.65	0.00	3.60	<50	790 ³	2,700	1,000 ²	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/14/08	Not able to sample well-no access agreement between Rolls-Royce and Port of Oakland														
07/03/04	8.25	4.49	0.00	3.76	<50	1,200 ⁶	4,400	1,800 ⁷	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/25/08	8.25	4.41	0.00	3.84	<50	<50	130	140 ¹⁶	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
12/19/08	8.25	4.31	0.00	3.94	<50	160 ⁶	840	340 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/26/09	8.25	4.05	0.00	4.20	<50	470 ³	1,500	570 ²	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
06/24/09	8.25	4.21	0.00	4.04	<50	<50	<100	650 ²	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/24/09	8.25	4.32	0.00	3.93	<50	130 ¹⁰	330	340 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
01/15/10	8.25	3.57	0.00	4.68	<50	120 ⁶	640	410 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/09/10	8.25	4.17	0.00	4.08	<50	82 ⁶	430	260 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/21/11	8.25	3.38	0.00	4.87	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/02/11	8.25	4.22	0.00	4.03	<50	63 ⁶	<100	240 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
04/17/12	8.25	3.70	0.00	4.55	<50	69 ⁶	340	370 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/18/12	8.25	4.33	0.00	3.92	<50	62 ⁶	210	490 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/25/13	8.25	4.31	0.00	3.94	<50	<50	<100	300	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA

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WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	SPHT (ft.)	GWE (msl)	TPH-G (µg/L)	TPH-D ¹ (µg/L)	TPH-MO (µg/L)	TPH-JE (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	Napthalene (µg/L)	SVOC (µg/L)
MW-9															
10/03/07	9.44	5.81	0.00	3.63	<50	7,700	10,000	6,700	<0.50	<0.50	<0.50	<0.50	<0.50 ⁴	<0.50	NA
03/14/08	9.44	5.51	0.00	3.93	<50	6,400	8,000	4,000 ⁷	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
06/26/08	9.44	5.72	0.00	3.72	<50	1,600 ¹⁰	1,800	1,800 ⁷	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/25/08	9.44	5.59	0.00	3.85	<50	5,900 ¹⁰	9,300	6,300 ¹⁶	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
12/19/08	9.44	5.43	0.00	4.01	<50	4,100 ⁶	8,500	4,000 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/26/09	9.44	5.26	0.00	4.18	<50	6,900 ⁶	9,700	5,600 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
06/24/09	9.44	5.42	0.00	4.02	<50	2,900 ⁶	5,200	1,800 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/24/09	9.44	5.53	0.00	3.91	<50	600 ¹⁰	1,100	720 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
01/15/10	9.44	4.69	0.00	4.75	<50	1,300 ⁶	3,100	1,600 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10 - <50 ^{21,22}
09/09/10	9.44	5.43	0.00	4.01	<50	1,900 ⁶	4,500	960 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/21/11	9.44	4.58	0.00	4.86	<50	280 ⁶	780	460 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/02/11	9.44	5.39	0.00	4.05	<50	250 ⁶	500	700 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
04/17/12	9.44	4.85	0.00	4.59	<50	1,200 ⁶	2,500	2,700 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/18/12	9.44	5.57	0.00	3.87	<50	750 ⁶	1,700	940 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/25/13	9.44	5.48	0.00	3.96	<50	870⁶	2,600	1,200	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
MW-10															
10/03/07	7.51	3.89	0.00	3.62	110	4,200	1,300	4,500	<0.50	<0.50	<0.50	<0.50	<0.50 ⁴	<0.50	NA
03/14/08	7.51	3.68	0.00	3.83	53	420	270	420 ⁷	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	NA
06/26/08	7.51	3.80	0.00	3.71	120	1,200	1,000	2,000	<0.50	<0.50	<0.50	<0.50	<0.50	5.0	NA
09/25/08	7.51	3.68	0.00	3.83	<50	3,100 ¹⁰	2,200	3,600	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
12/19/08	7.51	3.54	0.00	3.97	<50	1,700	1,200	1,900 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/26/09	7.51	3.36	0.00	4.15	53	1,500 ⁸	1,300	2,900	<0.50	<0.50	<0.50	<0.50	<0.50	1.8	NA
06/24/09	7.51	3.54	0.00	3.97	<50	710 ⁸	750	1,400	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/24/09	7.51	3.61	0.00	3.90	<50	480 ¹⁰	600	1,100 ¹⁸	<0.50	<0.50	<0.50	0.69	<0.50	<0.50	NA
01/15/10	7.51	2.81	0.00	4.70	<50	180	210	500 ¹⁸	<0.50	<0.50	0.66	3.5	<0.50	3.4	<10 - <50 ^{21,22}
09/09/10	7.51	3.48	0.00	4.03	<50	66 ⁸	<100	380 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	1.6	NA
03/21/11	7.51	2.70	0.00	4.81	<50	<50	<100	610 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/02/11	7.51	3.51	0.00	4.00	<50	93	260 ²³	890 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
04/17/12	7.51	2.97	0.00	4.54	<50	<50	<100	670 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/18/12	7.51	3.64	0.00	3.87	<50	77	180	600 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	0.51	NA
03/25/13	7.51	3.98	0.00	3.53	<50	120²⁴	<100	750	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA

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MW-11															
10/03/07	7.60	4.01	0.00	3.59	80	250	490	610	<0.50	<0.50	<0.50	<0.50	<0.50 ⁴	<0.50	NA
03/14/08	7.60	3.71	0.00	3.89	61	410 ⁶	1,200	520 ⁷	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
06/26/08	7.60	3.92	0.00	3.68	<50	2,700 ¹⁰	7,300	3,600 ¹⁵	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/25/08	7.60	3.82	0.00	3.78	<50	2,800 ¹⁰	5,900	3,800 ¹⁶	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
12/19/08	7.60	3.71	0.00	3.89	<50	1,500 ⁶	3,700	1,800 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/26/09	7.60	3.49	0.00	4.11	<50	2,300 ⁶	4,200	2,800 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
06/24/09	7.60	3.70	0.00	3.90	<50	1,100 ⁶	2,600	1,200 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/24/09	7.60	3.37	0.00	4.23	<50	1,400 ¹⁰	3,800	1,800 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
01/15/10	7.60	3.02	0.00	4.58	<50	260 ⁶	860	620 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10 - <50 ^{21,22}
09/09/10	7.60	3.63	0.00	3.97	<50	510 ¹⁰	1,200	520 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/21/11	7.60	2.85	0.00	4.75	<50	83 ⁶	280	410 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/02/11	7.60	3.70	0.00	3.90	<50	470 ⁶	990	720 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
04/17/12	7.60	3.13	0.00	4.47	<50	95 ⁶	220	1,300 ¹⁸	<0.50	<0.50	<0.50	<0.50	0.50	<0.50	NA
09/18/12	7.60	3.83	0.00	3.77	<50	230	600	660 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/25/13	7.60	3.80	0.00	3.80	<50	230	450	1,200	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
MW-12															
10/03/07	7.32	3.61	0.00	3.71	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50 ⁴	<0.50	NA
03/14/08	7.32	3.35	0.00	3.97	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
06/26/08	7.32	3.60	0.00	3.72	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/25/08	7.32	3.50	0.00	3.82	<50	<50	<100	51 ¹⁶	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
12/19/08	7.32	3.09	0.00	4.23	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/26/09	7.32	3.13	0.00	4.19	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
06/24/09	7.32	3.21	0.00	4.11	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/24/09	7.32	3.38	0.00	3.94	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
01/15/10	7.32	2.80	0.00	4.52	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/09/10	7.32	3.39	0.00	3.93	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/21/11	7.32	2.30	0.00	5.02	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/02/11	7.32	3.36	0.00	3.96	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
04/17/12	7.32	2.72	0.00	4.60	<50	<50	<100	99 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/18/12	7.32	3.56	0.00	3.76	<50	<50	<100	97 ⁹	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/25/13	7.32	3.53	0.00	3.79	<50	<50	<100	73	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA

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6701 Old Earhart Road
Oakland, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	SPHT (ft.)	GWE (msl)	TPH-G (µg/L)	TPH-D ¹ (µg/L)	TPH-MO (µg/L)	TPH-JE (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	Napthalene (µg/L)	SVOC (µg/L)
MW-13															
10/03/07	6.10	2.86	0.00	3.24	160	70 ⁸	<100	660	<0.50	<0.50	<0.50	<0.50	1.2 ⁴	1.7	NA
03/14/08	6.10	1.96	0.00	4.14	350 ¹²	490	130 ¹³	1,200	0.89	<0.50	<0.50	<0.50	2.0	8.9	NA
06/26/08	6.10	2.57	0.00	3.53	720	200 ⁸	<100	4,100 ¹⁵	2.0	<0.50	<0.50	0.60	3.3	3.3	NA
09/25/08	6.10	2.48	0.00	3.62	600	<200 ¹⁷	130 ¹³	1,900 ¹⁶	1.2	<0.50	<0.50	<0.50	2.9	11	NA
12/19/08	6.10	2.68	0.00	3.42	280	130 ⁸	<100	1,300 ¹⁸	0.89	<0.50	<0.50	<0.50	1.7	4.8	NA
03/26/09	6.10	2.44	0.00	3.66	310	86	120 ¹³	1,800 ¹⁸	0.81	<0.50	<0.50	<0.50	1.7	2.2	NA
06/24/09	6.10	2.91	0.00	3.19	330	170 ⁸	<100	2,000 ¹⁹	1.0	<0.50	<0.50	<0.50	1.9	5.2	NA
09/24/09	6.10	2.81	0.00	3.29	380	180	130 ¹³	5,400 ¹⁸	1.5	<0.50	<0.50	<0.50	2.5	6.8	NA
01/15/10	6.10	1.58	0.00	4.52	230	140	<100	1,600 ¹⁸	0.58	<0.50	<0.50	<0.50	1.4	3.1	NA
09/09/10	6.10	2.20	0.00	3.90	230	180 ⁸	<100	1,400 ¹⁸	0.95	<0.50	<0.50	<0.50	2.3	3.6	NA
03/21/11	6.10	1.10	0.00	5.00	260	76 ⁸	<100	2,400 ¹⁸	1.0	<0.50	<0.50	<0.50	1.7	3.1	NA
09/02/11	6.10	2.23	0.00	3.87	380 ¹²	500	260	1,400 ¹⁸	<0.50	<0.50	<0.50	<0.50	1.4	1.4	NA
04/17/12	6.10	1.50	0.00	4.60	310	190	110	3,400 ¹⁸	1.0	<0.50	<0.50	<0.50	2.6	1.4	NA
09/18/12	6.10	2.25	0.00	3.85	280	190	140	1,800 ¹⁸	0.68	<0.50	<0.50	<0.50	2.3	0.89	NA
03/25/13	6.10	2.52	0.00	3.58	170¹²	<50	<100	610	<0.50	<0.50	<0.50	<0.50	1.4	<0.50	NA
MW-14															
10/02/07	6.42	2.40	0.00	4.02	67	300	870	1,400	<0.50	<0.50	<0.50	<0.50	1.4 ⁴	6.1	NA
03/14/08	6.42	2.44	0.00	3.98	50	250 ⁶	350	500 ⁷	<0.50	<0.50	<0.50	<0.50	1.7	5.0	NA
06/26/08	6.42	2.62	0.00	3.80	<50	570 ¹⁰	2,700	2,000 ¹⁵	<0.50	<0.50	<0.50	<0.50	1.4	3.1	NA
09/25/08	6.42	2.58	0.00	3.84	<50	510 ¹⁰	1,700	1,800 ¹⁶	<0.50	<0.50	<0.50	<0.50	1.0	<0.50	NA
12/19/08	6.42	2.14	0.00	4.28	<50	480 ⁶	2,100	1,200 ¹⁸	<0.50	<0.50	<0.50	<0.50	1.2	<0.50	NA
03/26/09	6.42	2.23	0.00	4.19	<50	79 ⁶	540	1,000 ¹⁸	<0.50	<0.50	<0.50	<0.50	0.89	<0.50	NA
06/24/09	6.42	2.33	0.00	4.09	<50	<50	290	1,100 ¹⁸	<0.50	<0.50	<0.50	<0.50	1.2	0.52	NA
09/24/09	6.42	2.47	0.00	3.95	<50	88 ¹⁰	350	1,200 ¹⁸	<0.50	<0.50	<0.50	<0.50	0.83	<0.50	NA
01/15/10	6.42	1.95	0.00	4.47	<50	60 ⁶	490	1,100 ¹⁸	<0.50	<0.50	<0.50	<0.50	1.0	<0.50	NA
09/09/10	6.42	2.52	0.00	3.90	<50	150 ¹⁰	500	890 ¹⁸	<0.50	<0.50	<0.50	<0.50	1.2	<0.50	NA
03/21/11	6.42	1.40	0.00	5.02	<50	<50	230	730 ¹⁸	<0.50	<0.50	<0.50	<0.50	1.3	<0.50	NA
09/02/11	6.42	2.49	0.00	3.93	<50	140 ⁶	550	900 ¹⁸	<0.50	<0.50	<0.50	<0.50	0.98	<0.50	NA
04/17/12	6.42	1.83	0.00	4.59	<50	140 ⁶	800	2,400 ¹⁸	<0.50	0.69	<0.50	<0.50	1.2	<0.50	NA
09/18/12	6.42	2.65	0.00	3.77	51	130 ⁶	680	1,300 ¹⁸	<0.50	<0.50	<0.50	<0.50	1.0	<0.50	NA
03/25/13	6.42	2.63	0.00	3.79	<50	160	640	2,000	<0.50	<0.50	<0.50	<0.50	1.1	<0.50	NA

Table 1
Groundwater Monitoring Data and Analytical Results
Rolls-Royce Engine Services Test Facility
6701 Old Earhart Road
Oakland, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	SPHT (ft.)	GWE (msl)	TPH-G (µg/L)	TPH-D ¹ (µg/L)	TPH-MO (µg/L)	TPH-JE (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	Napthalene (µg/L)	SVOC (µg/L)
MW-15															
10/02/07	7.51	4.85	0.00	2.66	<50	99	<100	120	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/14/08	7.51	4.62	0.00	2.89	<50	<50	<100	88 ⁷	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
06/26/08	7.51	4.81	0.00	2.70	<50	<50	<100	84 ⁷	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/25/08	7.51	4.81	0.00	2.70	<50	<50	<100	53	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
12/19/08	7.51	4.67	0.00	2.84	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/26/09	7.51	4.45	0.00	3.06	<50	<50	<100	110 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
06/24/09	7.51	4.68	0.00	2.83	<50	<50	<100	59	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/24/09	7.51	4.75	0.00	2.76	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
01/15/10	7.51	4.29	0.00	3.22	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/09/10	7.51	4.78	0.00	2.73	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/21/11	7.51	2.71	0.00	4.80	<50	<50	<100	200 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/02/11	7.51	4.77	0.00	2.74	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
04/17/12	7.51	3.65	0.00	3.86	<50	<50	120 ²³	170 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/18/12	7.51	4.89	0.00	2.62	<50	<50	<100	50 ⁹	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/25/13	7.51	4.78	0.00	2.73	<50	<50	<100	76	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
MW-17															
09/14/07	0.04	4.10	0.00	-4.06	<50	<50	220	150 ²	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/14/08	Not able to sample well-no access agreement between Rolls-Royce and Port of Oakland														
07/03/08	0.04	1.98	0.00	-1.94	<50	<50	<100	84 ⁷	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
9/25/08 ¹⁴	0.04	4.77	0.00	-4.73	<50	<50	120	110 ¹⁶	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
12/19/08	0.04	2.24	0.00	-2.20	<50	<50	<100	54	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/26/09	0.04	1.85	0.00	-1.81	<50	<50	<100	71 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
06/24/09	Not able to sample well-Oakland Airport security failed to provide access to well														
09/24/09	0.04	2.97	0.00	-2.93	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
1/15/10 ¹⁴	0.04	2.49	0.00	-2.45	<50	<50	<100	59 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/09/10	0.04	2.79	0.00	-2.75	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/21/11	0.04	2.25	0.00	-2.21	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/02/11	0.04	2.69	0.00	-2.65	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
04/17/12	0.04	2.49	0.00	-2.45	<50	<50	<100	240 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/18/12	0.04	2.96	0.00	-2.92	<50	<50	140 ²³	84 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/25/13	0.04	2.51	0.00	-2.47	<50	<50	<100	93	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA

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MW-18																
10/02/07	7.05	4.15	0.55	3.34**	Not developed or sampled due to presence of SPH											
03/14/08	7.05	3.62	0.63	3.93**	Not sampled due to presence of SPH				--	--	--	--	--	--	--	--
06/26/08	7.05	4.11	1.14	3.85**	Not sampled due to presence of SPH											
09/25/08	7.05	3.77	0.56	3.73**	Not sampled due to presence of SPH											
12/19/08	7.05	3.30	0.36	4.04**	Not sampled due to presence of SPH											
03/26/09	7.05	3.28	0.55	4.21**	Not sampled due to presence of SPH											
06/24/09	7.05	3.53	0.48	3.90**	Not sampled due to presence of SPH											
09/24/09	7.05	3.57	0.46	3.85**	Not sampled due to presence of SPH											
01/15/10	7.05	3.02	0.66	4.56**	Not sampled due to presence of SPH											
09/09/10	7.05	3.18	0.10	3.95**	Not sampled due to presence of SPH											
03/21/11	7.05	1.99	0.15	5.18**	Not sampled due to presence of SPH											
09/02/11	7.05	3.49	0.51	3.97**	Not sampled due to presence of SPH											
04/17/12	7.05	2.52	0.15	4.65**	Not sampled due to presence of SPH											
09/18/12	7.05	3.14	0.00	3.91	2,100	210,000 ¹⁰	190,000	290,000	<0.50	<0.50	<0.50	2.4	2.0	<2.0	NA	
03/25/13	7.05	3.27	0.15	3.90**	740	35,000	39,000	61,000	<0.50	<0.50	<0.50	1.7	2.2	<0.80	NA	
NPORD MW-3																
09/14/07	8.11	4.43	0.00	3.68	<50	<50	<100	64 ²	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	
03/14/08	Not able to sample well-no access agreement between Rolls-Royce and Port of Oakland															
07/03/08	8.11	3.96	0.00	4.15	<50	<50	<100	99 ⁷	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	
09/25/08	8.11	4.06	0.00	4.05	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	
12/19/08	8.11	3.78	0.00	4.33	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	
03/26/09	8.11	4.22	0.00	3.89	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	
06/24/09	8.11	4.02	0.00	4.09	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	
09/24/09	8.11	4.19	0.00	3.92	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	
01/15/10	8.11	3.51	0.00	4.60	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	
09/09/10	8.11	3.96	0.00	4.15	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	
03/21/11	8.11	3.28	0.00	4.83	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	
09/02/11	8.11	4.10	0.00	4.01	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	
04/17/12	8.11	4.00	0.00	4.11	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	
09/18/12	8.11	4.18	0.00	3.93	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	
03/25/13	8.11	4.35	0.00	3.76	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	

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NPORD MW-4															
09/14/07	10.06	6.48	0.00	3.58	50	1,000 ³	1,400	2,000 ²	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/14/08	Not able to sample well-no access agreement between Rolls-Royce and Port of Oakland														
07/03/08	10.06	6.26	0.00	3.80	<50	360 ⁶	700	960 ⁷	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/25/08	10.06	6.28	0.00	3.78	<50	150 ⁶	240	820 ¹⁶	<0.50	<0.50	<0.50	<0.50	<0.50 ⁴	<0.50	NA
12/19/08	10.06	6.15	0.00	3.91	<50	320 ¹⁰	640	1,400 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/26/09	10.06	5.91	0.00	4.15	<50	95	160	520 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
06/24/09	10.06	6.10	0.00	3.96	<50	200 ⁶	100	1,000	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/24/09	10.06	6.20	0.00	3.86	<50	200 ^{10,20}	180 ²⁰	500 ^{18,20}	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
01/15/10	10.06	5.45	0.00	4.61	<50	93	<100	770 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/09/10	10.06	6.06	0.00	4.00	<50	<50	<100	290 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/21/11	10.06	5.31	0.00	4.75	<50	<50	<100	270	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/02/11	10.06	6.11	0.00	3.95	<50	95	<100	320 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
04/17/12	10.06	5.58	0.00	4.48	<50	64	130 ²³	940 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/18/12	10.06	6.27	0.00	3.79	<50	150	250	800 ¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/25/13	10.06	6.23	0.00	3.83	<50	57	<100	820	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
QA															
09/14/07	--	--	--	--	<50	NA	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
10/02/07	--	--	--	--	<50	NA	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/14/08	--	--	--	--	<50	NA	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
6/26/08 ¹⁴	--	--	--	--	<50	NA	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
07/03/08	--	--	--	--	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/25/08	--	--	--	--	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
12/19/08	--	--	--	--	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/26/09	--	--	--	--	<50	<50	<100	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
06/24/09	--	--	--	--	<50	NA	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/24/09	--	--	--	--	<50	NA	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
01/15/10	--	--	--	--	<50	NA	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/09/10	--	--	--	--	<50	NA	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/21/11	--	--	--	--	<50	NA	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/02/11	--	--	--	--	<50	NA	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA

Table 1
Groundwater Monitoring Data and Analytical Results
Rolls-Royce Engine Services Test Facility
6701 Old Earhart Road
Oakland, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	SPHT (ft.)	GWE (msl)	TPH-G (µg/L)	TPH-D ¹ (µg/L)	TPH-MO (µg/L)	TPH-JE (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	Napthalene (µg/L)	SVOC (µg/L)
------------------	---------------	--------------	---------------	--------------	-----------------	------------------------------	------------------	------------------	-------------	-------------	-------------	-------------	----------------	----------------------	----------------

QA (cont)

04/17/12	--	--	--	--	<50	NA	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
09/18/12	--	--	--	--	<50	NA	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
03/25/13	--	--	--	--	<50	NA	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA

Table 1
Groundwater Monitoring Data and Analytical Results
Rolls-Royce Engine Services Test Facility
6701 Old Earhart Road
Oakland, California

EXPLANATIONS:

TOC = Top of Casing Elevation
DTW = Depth to Water
GWE = Groundwater Elevation
ft = feet

SPHT = Separate Phase Hydrocarbon Thickness
TPH-G= Total Petroleum Hydrocarbons as Gasoline
TPH-D = Total Petroleum Hydrocarbons as Diesel

TPH-MO = Total Petroleum Hydrocarbons as Motor Oil
TPH-JF = Total Petroleum Hydrocarbons as Jet Fuel
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total Xylenes
MTBE = Methyl Tertiary Butyl Ether

SVOC = Semi-Volatile Organic Compounds
(µg/L) = Micrograms per liter
NA = Not Analyzed
-- = Not Measured
QA = Trip Blank

ANALYTICAL METHODS:

Kiff Analytical LLC (NELAP #08263CA)
TPH-G, BTEX, MTBE, and Naphthalene by EPA Method 8260B
TPH-D, TPH-MO, and TPH-JF by modified EPA Method 8015
SVOC by EPA Method 8270C

* TOC elevations surveyed relative to mean sea level by Morrow Surveying (PLS #5161) on October 8, 2007

** = GWE corrected for the presence of SPH [(TOC-DTW) + (SPH thickness x SPH specific gravity)]. Specific gravity of SPH is assumed to be 0.8.

- 1 Analyzed with Silica Gel Cleanup
- 2 Discrete peaks, higher boiling hydrocarbons present in sample that are atypical for Jet Fuel
- 3 Discrete peaks, higher boiling hydrocarbons present in sample that are atypical for Diesel Fuel
- 4 Matrix spike/matrix spike duplicate results associated with these samples for the analyte Methyl-t-butyl ether were affected by the analyte concentrations already present in the un-spiked sample.
- 5 Due to the formation of an emulsion in this sample, the sample was centrifuged and decanted prior to extraction.
- 6 Hydrocarbons present in this sample are higher-boiling than typical Diesel Fuel.
- 7 Hydrocarbons present in this sample are higher-boiling than typical Jet Fuel.
- 8 Lower boiling hydrocarbons are present in this sample that are atypical for Diesel Fuel.
- 9 Discrete peaks present in this sample that are atypical for Jet Fuel.
- 10 Some lower-boiling hydrocarbons than Diesel and some higher-boiling hydrocarbons than Diesel are present in this sample.
- 11 Both lower-boiling and higher-boiling hydrocarbons than Jet Fuel are present in this sample.
- 12 Sample contained primarily compounds not found in typical Gasoline.
- 13 Hydrocarbons present in this sample are lower-boiling than typical Motor Oil
- 14 Sample was analyzed by EPA Method 8260B using bottles that contained headspace bubbles greater than 1/4-inch in diameter.
- 15 Lower boiling hydrocarbons are present in this sample that are atypical for Jet Fuel.
- 16 Chromatographic pattern not typical for Jet Fuel.
- 17 Diesel method reporting limit for this sample was increased due to interference from Gasoline range hydrocarbons.
- 18 Higher-boiling hydrocarbons are present in this sample that are atypical for Jet Fuel.
- 19 Laboratory confirmed results

Table 1
Groundwater Monitoring Data and Analytical Results
Rolls-Royce Engine Services Test Facility
6701 Old Earhart Road
Oakland, California

EXPLANATIONS:

- ²⁰ Repeat analysis by Modified EPA Method 8015 yielded inconsistent results for sample NPORD MW-4. The concentrations appear to vary between bottles. The highest concentration results are reported.
- ²¹ All analytes were ND or less than their respective reporting limits
- ²² Analysis for SVOC requested by Client.
- ²³ Discrete peaks in Motor Oil range, atypical for Motor Oil.
- ²⁴ Discrete peaks in Diesel Range, atypical for Diesel Fuel.

Table 2
Field Measurements and Groundwater Analytical Results
Rolls-Royce Engine Services Test Facility
6701 Old Earhart Road
Oakland, California

WELL ID/ DATE	D.O.	D.O.	ORP	ORP	Ferric	Ferrous	Nitrate as.	Sulfate as.	Methane
	Pre-Purge (mg/L)	Post-Purge (mg/L)	Pre-Purge (mV)	Post-Purge (mV)	Iron (mg/L)	Iron (mg/L)	NO ₃ (mg/L)	SO ₄ (mg/L)	
MW-1 09/09/10	0.00	0.74	-462.4	-124.7	3.2	0.81	<10	2,000	117
MW-2 09/09/10	0.03	0.29	-261.9	-233.5	--	--	--	--	--
MW-3 09/09/10	0.38	0.24	-149.2	-123.5	--	--	--	--	--
MW-4 09/09/10	0.09	0.06	-295.2	-299.4	91	2.4	<2.5	8.6	6,590
MW-5 09/09/10	0.84	0.05	-374	-459	68	12	<2.5	<2.5	4,760
MW-6 09/09/10	0.22	0.20	-271.8	-273.5	40	<0.10	<2.5	540	3,280
MW-7 09/09/10	0.07	0.09	-260.7	-257.4	340	18	<2.5	<2.5	6,350
MW-8 09/09/10	0.14	0.11	-276	-281	23	2.1	<2.5	3.9	8,500
MW-9 09/09/10	0.00	0.65	-548.1	-501.4	13	<0.10	<2.5	23	8,310
MW-10 09/09/10	0.11	0.58	-333.3	-391.2	--	--	--	--	--
MW-11 09/09/10	0.84	0.96	-399.4	-370.1	--	--	--	--	--
MW-12 09/09/10	0.15	0.49	-340.1	-348.2	--	--	--	--	--
MW-13 09/09/10	0.45	0.82	-142.9	-130.5	--	--	--	--	--
MW-14 09/09/10	0.20	0.14	-264.6	-223.9	--	--	--	--	--

Table 2
Field Measurements and Groundwater Analytical Results
Rolls-Royce Engine Services Test Facility
6701 Old Earhart Road
Oakland, California

WELL ID/ DATE	D.O.	D.O.	ORP	ORP	Ferric	Ferrous	Nitrate as.	Sulfate as.	Methane
	Pre-Purge (mg/L)	Post-Purge (mg/L)	Pre-Purge (mV)	Post-Purge (mV)	Iron (mg/L)	Iron (mg/L)	NO ₃ (mg/L)	SO ₄ (mg/L)	
MW-15 09/09/10	0.51	0.63	196.1	180.2	--	--	--	--	--
MW-17 09/09/10	0.40	0.51	168.4	149.1	--	--	--	--	--
NPORD MW-3 09/09/10	0.46	0.50	-208.2	-211.6	3.2	3.2	<10	1,200	27.8

Table 2
Field Measurements and Groundwater Analytical Results
Rolls-Royce Engine Services Test Facility
6701 Old Earhart Road
Oakland, California

EXPLANATIONS:

ORP = Oxidation Reduction Potential
D.O. = Dissolved Oxygen
(mV) = Millivolts
(µg/L) = Micrograms per liter
(mg/L) = Milligrams per liter
-- = Not Measured

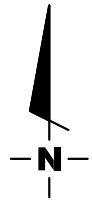
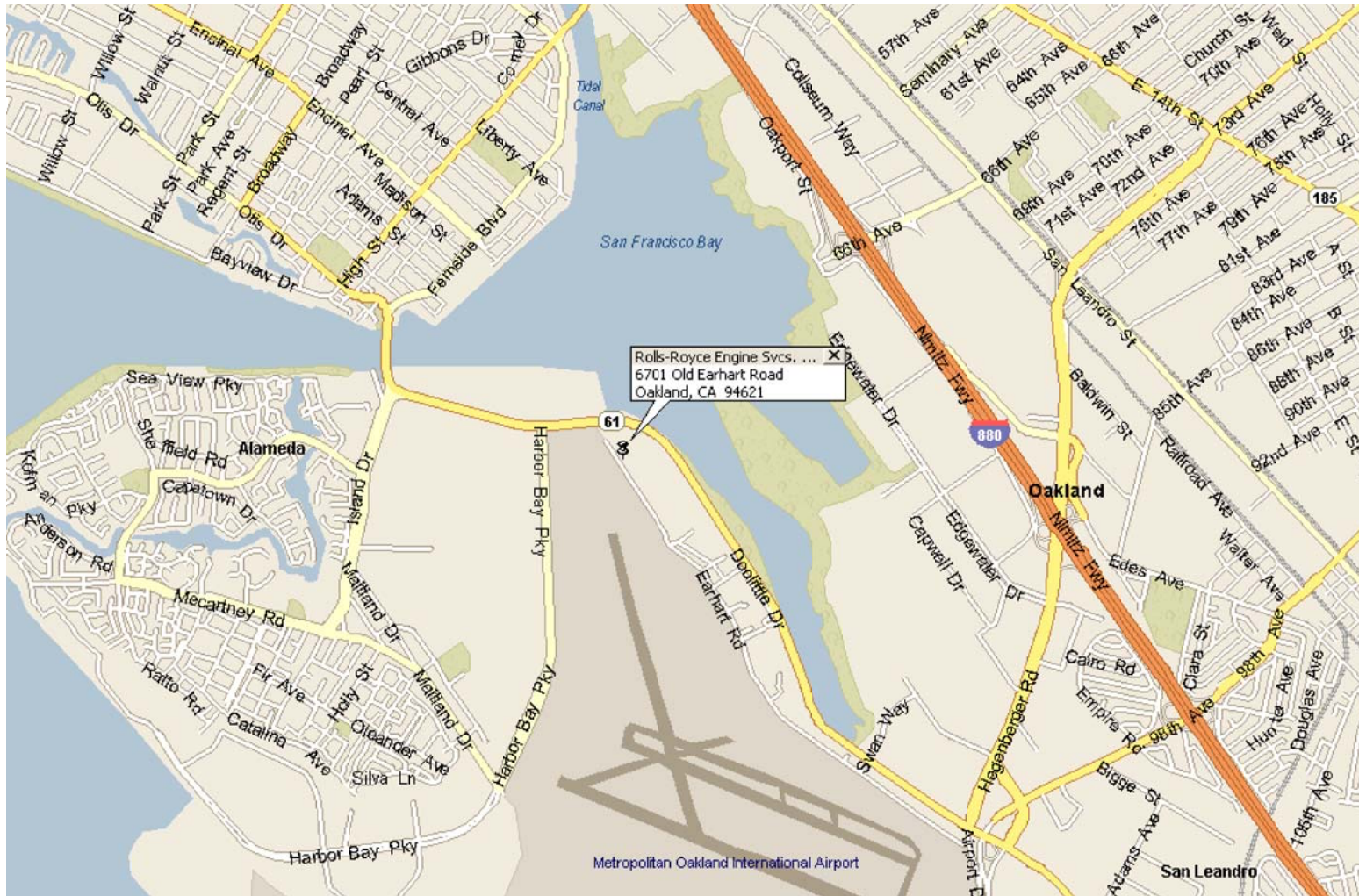
ANALYTICAL METHODS:

Nitrate as NO₃ and Sulfate as SO₃ by EPA Method 300.0
Ferric Iron by 200.7/SM 3500 Fe D
Ferrous Iron by SM 3500 Fe D
Methane by Method RSK-175M

Table 3
 SPH Thickness and Volumes Purged - MW-18
 Rolls-Royce Engine Services Test Facility
 6701 Old Earhart Road
 Oakland, California

Date	SPH Thickness (feet)	Depth To SPH From Top of Casing (feet)	Approximate Volume of Water Purged (gallons)	Approximate Volume of SPH Purged (gallons)
9/14/07	0.55	3.60	2.00	2.50
3/14/08	0.63	2.99	0.80	0.30
6/26/08	1.14	2.97	1.00	0.13
9/25/08	0.56	3.21	2.00	0.07
12/19/08	0.36	2.94	0.13	0.16
3/26/09	0.55	2.73	0.08	0.08
6/24/09	0.48	3.05	0.05	0.06
9/24/09	0.46	3.11	0.00	0.07
1/15/10	0.66	2.36	2.00	0.14
9/9/10	0.10	3.08	0.13	0.01
3/21/11	0.15	1.84	0.26	0.03
9/2/11	0.51	2.98	0.16	0.26
4/17/12	0.15	2.37	0.05	0.26
9/18/12	0.00	NA	3.50	0.00
3/25/13	0.15	3.12	4.50	0.15
Totals:			16.66	4.21

NA = Not Applicable



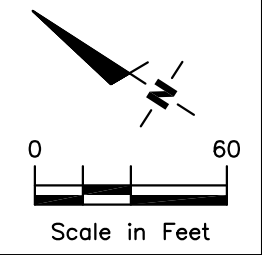
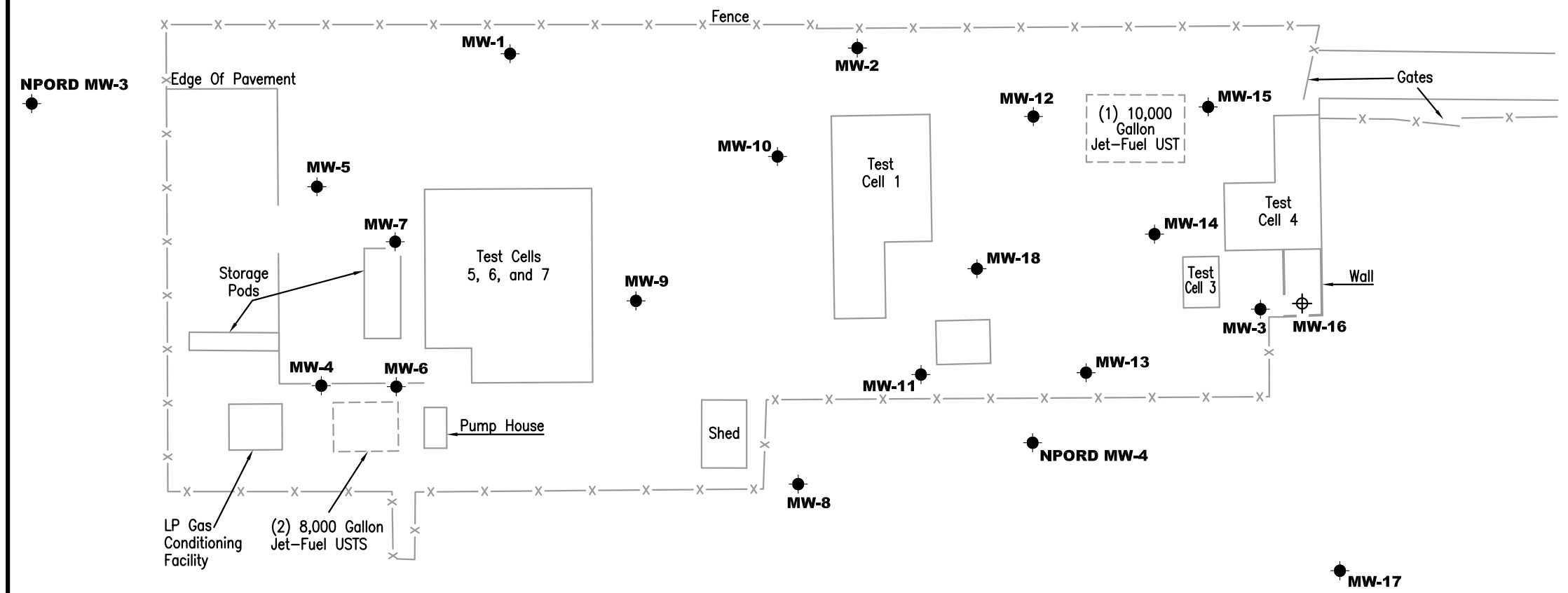
SITE LOCATION MAP
 ROLLS-ROYCE ENGINE SERVICES TEST FACILITY
 6701 OLD EARHART RD.
 OAKLAND, CA

FIGURE

1

EXPLANATION

- Groundwater monitoring well
- ⊕ Proposed monitoring well – not installed location inaccessible by drill rig



Source: Figure modified from drawing provided by Morrow Surveying, Dated: 10/8/07.

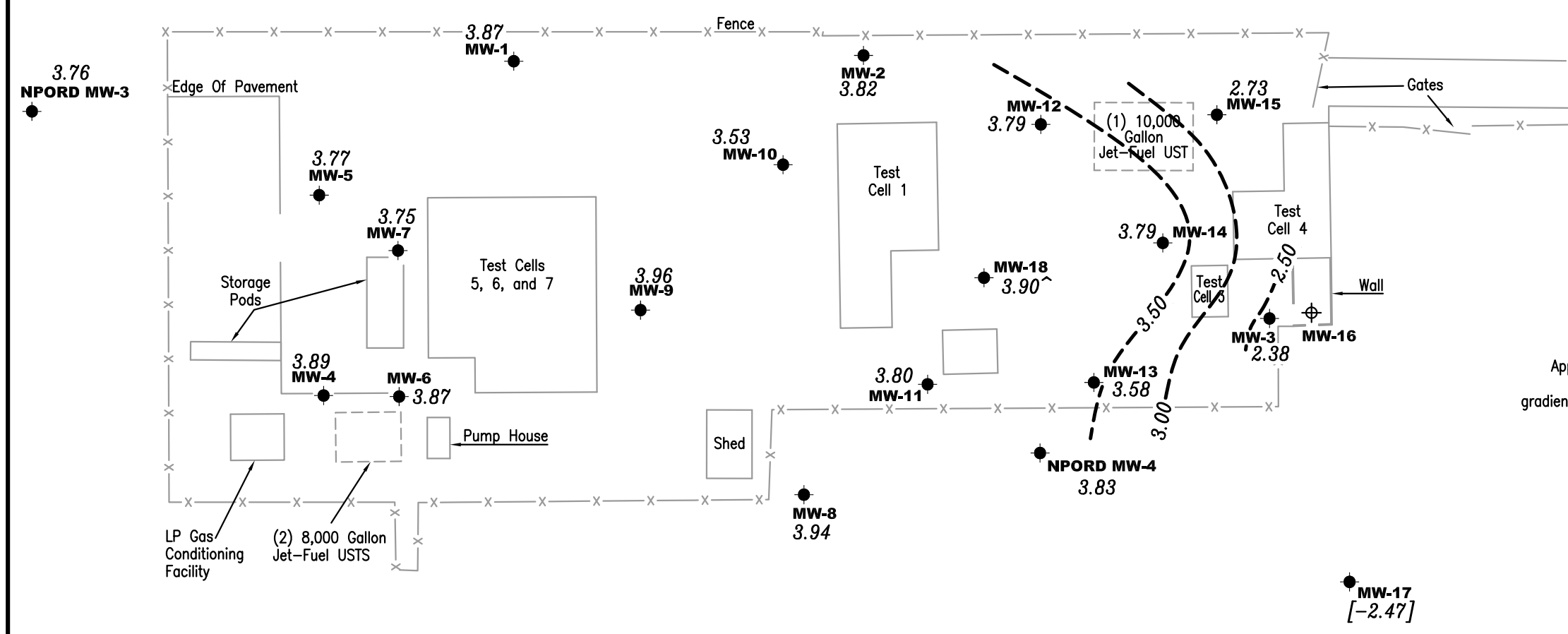
SITE PLAN
 Rolls-Royce Engine Services Test Facility
 6701 Old Earhart Road
 Oakland, CA

GETTLER - RYAN INC.
 6747 Sierra Court, Suite J
 Dublin, CA 94568
 (925) 551-7555

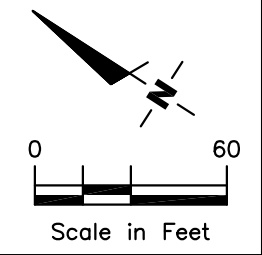
PROJECT NUMBER: 948218.2
 REVIEWED BY: [Signature]
 DATE: 11/07
 REVISED DATE: [Blank]

EXPLANATION

- Groundwater monitoring well
- ⊕ Proposed monitoring well – not installed location inaccessible by drill rig
- 99.99 Groundwater elevation in feet referenced to Mean Sea Level
- - - 99.99 - - - Groundwater elevation contour, dashed where inferred
- [99.99] Not used in contouring
- ^ Groundwater elevation corrected for the presence of separate-phase hydrocarbons



Approximate groundwater flow direction at gradients of 0.02 to 0.03 Ft./Ft.



Source: Figure modified from drawing provided by Morrow Surveying, Dated: 10/8/07.

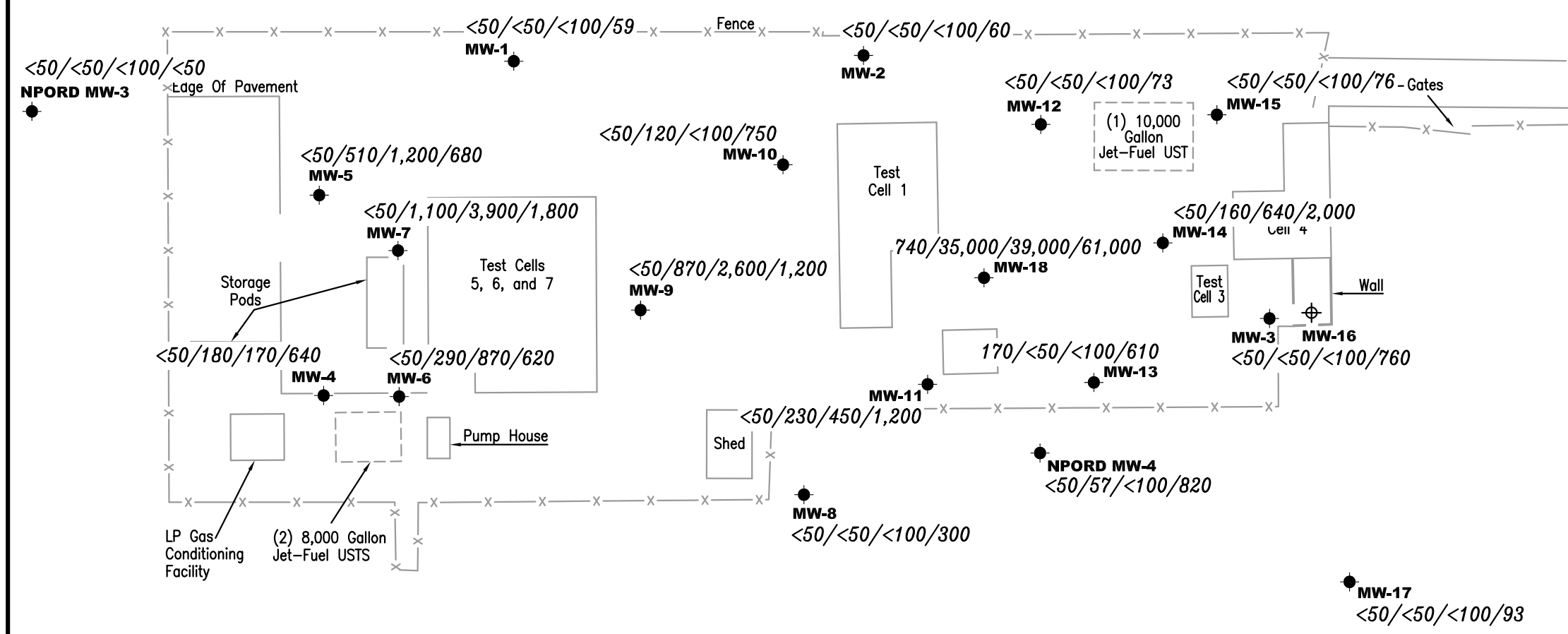
POTENTIOMETRIC MAP
 Rolls-Royce Engine Services Test Facility
 6701 Old Earhart Road
 Oakland, CA

GETTLER - RYAN INC.
 6747 Sierra Court, Suite J
 Dublin, CA 94568
 (925) 551-7555

PROJECT NUMBER: 948218.2
 REVIEWED BY: [Signature]
 DATE: March 25, 2013
 REVISION DATE: [Blank]

EXPLANATION

- Groundwater monitoring well
- ⊕ Proposed monitoring well – not installed location inaccessible by drill rig
- A/B/C/D** Total Petroleum Hydrocarbons
TPH as Gasoline/TPH as Diesel/
TPH as Motor Oil/TPH as Jet
Fuel concentrations in ppb
- NS** Not Sampled
- SPH** Separate Phase Hydrocarbons



Source: Figure modified from drawing provided by Morrow Surveying, Dated: 10/8/07.

CONCENTRATION MAP
 Rolls-Royce Engine Services Test Facility
 6701 Old Earhart Road
 Oakland, CA

GETTLER - RYAN INC.
 6747 Sierra Court, Suite J
 Dublin, CA 94568
 (925) 551-7555

PROJECT NUMBER: 948218.2
 FILE NAME: P:\Enviro\Rolls Royce\013-Rolls Royce.dwg | Layout: Tab: Con2
 REVIEWED BY: [Signature]
 DATE: March 25, 2013
 REVISED DATE: [Blank]

GR FIELD METHODS AND PROCEDURES - GROUNDWATER SAMPLING

Gettler-Ryan Inc. (GR) field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. All work is performed in accordance with the GR Health & Safety Plan and all client-specific programs. The scope of work and type of analysis to be performed is determined prior to commencing field work.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, all depth to water level measurements are collected with a static water level indicator and are also recorded in the field notes, prior to purging and sampling any wells.

After water levels are collected and prior to sampling, if purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, peristaltic or Grundfos), or disposable bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging (additional parameters such as dissolved oxygen, oxidation reduction potential, turbidity may also be measured, depending on specific scope of work.). Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards, as directed by the scope of work. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

WELL CONDITION STATUS SHEET

Client/Facility #: Rolls Royce Engine Test
 Site Address: 6701 Old Earhart Road
 City: Oakland, CA

Job #: 25-948218.1
 Event Date: 3/25/13
 Sampler: JOE

WELL ID	Vault Frame Condition	Gasket/O-Ring (M) Missing (R) Replaced	BOLTS (M) Missing (R) Replaced	Bolt Flanges B=Broken S=Stripped R=Retap	APRON Condition C=Cracked B=Broken G=Gone	Grout Seal (Deficient) inches from TOC	Casing (Condition prevents tight cap seal)	REPLACE LOCK Y/N	REPLACE CAP Y/N	WELL VAULT Manufacture/Size/ # of Bolts	Pictures Taken Y/N
MW-13	OK	M	OK					N	N	Morrison 12" 2	N
MW-2	OK			S-3	OK			N	N	Longyear 8" 3	N
MW-10	OK							N	N	Morrison 8" 2	N
MW-11	OK			S-1	OK			N	N	Morrison 8" 2	N
MW-18	OK	M	M-2	B-2	OK			N	N	Morrison 8" 2	N

Comments _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Rolls Royce Engine Test
 Site Address: 6701 Old Earhart Road
 City: Oakland, CA

Job Number: 25-948218.1
 Event Date: 03-25-13 (inclusive)
 Sampler: AM

Well ID: mw-1
 Well Diameter: 2.14 in.
 Total Depth: 8.44 ft.
 Depth to Water: 3.30 ft.

Date Monitored: 03-25-13

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.14 xVF .17 = .87 x3 case volume = Estimated Purge Volume: 2.62 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 4.32

Purge Equipment:

Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____
 Product Transferred to: _____

Start Time (purge): 1200 Weather Conditions: cloudy
 Sample Time/Date: 1230 / 03-25-13 Water Color: clear Odor: Y / N
 Approx. Flow Rate: _____ gpm. Sediment Description: clear
 Did well de-water? _____ If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 3.42

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1203</u>	<u>1</u>	<u>8.20</u>	<u>3999</u>	<u>17.0</u>	-	
<u>1206</u>	<u>2</u>	<u>8.11</u>	<u>3999</u>	<u>17.0</u>		
<u>1209</u>	<u>3</u>	<u>8.08</u>	<u>3999</u>	<u>17.1</u>		
			<u>OUT OF RANGE</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>mw-1</u>	<u>7</u> x voa vial	YES	HCL	KIFF	TPH-JET FUEL/TPH-MO/TPH-DROW/sgc(8015)/ TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260)

COMMENTS:

MOCKUP 8" / 3 STRIPPED GASKETS

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Add/Replaced Bolt: _____



GETTLER-RYAN Inc.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Rolls Royce Engine Test Job Number: 25-948218.1
 Site Address: 6701 Old Earhart Road Event Date: 3/25/13 (inclusive)
 City: Oakland, CA Sampler: JOE

Well ID: MW-2 Date Monitored: 3/25/13
 Well Diameter: 214 in.
 Total Depth: 8.95 ft.
 Depth to Water: 3.21 ft.

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 4.35
 xVF 0.17 = 0.97 x3 case volume = Estimated Purge Volume: 2.92 gal.

Purge Equipment:
 Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____
 Product Transferred to: _____

Start Time (purge): 1004 Weather Conditions: Clear
 Sample Time/Date: 1023 / 3/25/13 Water Color: gray Odor: Y / N
 Approx. Flow Rate: _____ gpm. Sediment Description: Light
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 4.35

Time (2400 hr.)	Volume (gal.)	pH	Conductivity ^{MS} (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1005</u>	<u>1</u>	<u>7.15</u>	<u>20.00</u>	<u>16.1</u>		
<u>1007</u>	<u>2</u>	<u>7.11</u>	<u>20.00</u>	<u>15.9</u>		
<u>1009</u>	<u>3</u>	<u>7.10</u>	<u>20.00</u>	<u>15.6</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-2</u>	<u>7</u> x voa vial	YES	HCL	KIFF	TPH-JET FUEL/TPH-MO/TPH-DROW/sgc(8015)/TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260)

COMMENTS: _____

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Add/Replaced Bolt: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Rolls Royce Engine Test Job Number: 25-948218.1
 Site Address: 6701 Old Earhart Road Event Date: 3-25-13 (inclusive)
 City: Oakland, CA Sampler: FT

Well ID: MW-3 Date Monitored: 3-25-13
 Well Diameter: 2 1/4 in.
 Total Depth: 12.10 ft.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Depth to Water: 4.35 ft. Check if water column is less then 0.50 ft.
7.75 xVF .17 = 1.31 x3 case volume = Estimated Purge Volume: 4.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.90

Purge Equipment:
 Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____
 Product Transferred to: _____

Start Time (purge): 1150 Weather Conditions: FDL
 Sample Time/Date: 1210 / 3-25-13 Water Color: CLEAR Odor: Y / (D)
 Approx. Flow Rate: / gpm. Sediment Description: NONE
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 4.40

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - <u>DS</u>)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1153</u>	<u>1.5</u>	<u>7.57</u>	<u>1736</u>	<u>15.9</u>	/	/
<u>1156</u>	<u>3.0</u>	<u>7.52</u>	<u>1776</u>	<u>16.0</u>	/	/
<u>1159</u>	<u>4.0</u>	<u>7.48</u>	<u>1844</u>	<u>16.2</u>	/	/

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3</u>	<u>7</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>KIFF</u>	<u>TPH-JET FUEL/TPH-MO/TPH-DROW/sgc(8015)/TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260)</u>

COMMENTS: BOARY L. 8" (2 BROKEN BOLTS IN 2 OF 3 FLANGES)

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Add/Replaced Bolt: _____



GETTLER-RYAN Inc.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Rolls Royce Engine Test Job Number: 25-948218.1
 Site Address: 6701 Old Earhart Road Event Date: 03-25-13 (inclusive)
 City: Oakland, CA Sampler: AM

Well ID: MW-4 Date Monitored: 03-25-13
 Well Diameter: 2.4 in.
 Total Depth: 9.95 ft.
 Depth to Water: 5.90 ft. Check if water column is less than 0.50 ft.
4.05 x VF .17 = .68 x3 case volume = Estimated Purge Volume: 2.06 gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 6.71

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Purge Equipment:
 Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____
 Product Transferred to: _____

Start Time (purge): 1:34 Weather Conditions: OVERCAST
 Sample Time/Date: 1100 / 03-25-13 Water Color: GREEN Odor: Y / N
 Approx. Flow Rate: - gpm. Sediment Description: CLEAR
 Did well de-water? - If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 6.02

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1:37</u>	<u>1</u>	<u>7.69</u>	<u>1798</u>	<u>17.1</u>	<u>-</u>	
<u>1:40</u>	<u>2</u>	<u>7.65</u>	<u>1791</u>	<u>17.1</u>		
<u>1:43</u>	<u>2.5</u>	<u>7.61</u>	<u>1785</u>	<u>17.2</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-4</u>	<u>7 x voa vial</u>	<u>YES</u>	<u>HCL</u>	<u>KIFF</u>	<u>TPH-JET FUEL/TPH-MO/TPH-DROW/sgc(8015)/TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260)</u>

COMMENTS:

MORRISON 8" / 2

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Add/Replaced Bolt: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Rolls Royce Engine Test Job Number: 25-948218.1
 Site Address: 6701 Old Earhart Road Event Date: 3/25/13 (inclusive)
 City: Oakland, CA Sampler: JH

Well ID: MW-5 Date Monitored: 3/25/13
 Well Diameter: 014 in.
 Total Depth: 9.63 ft.
 Depth to Water: 4.58 ft.

Volume	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
Factor (VF)	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.
 $5.05 \times VF .17 = .85 \times 3 \text{ case volume} = \text{Estimated Purge Volume: } 2.57 \text{ gal.}$
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.59

Purge Equipment:

Disposable Bailer X
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer X
 Pressure Bailer _____
 Discrete Bailer _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____
 Product Transferred to: _____

Start Time (purge): 1015 Weather Conditions: cloudy
 Sample Time/Date: 1045 / 3/25/13 Water Color: Light Odor: Y / 0
 Approx. Flow Rate: _____ gpm. Sediment Description: Light
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 4.93

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - 25)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1020</u>	<u>1</u>	<u>7.65</u>	<u>2378</u>	<u>22.3</u>		
<u>1025</u>	<u>2</u>	<u>7.61</u>	<u>2321</u>	<u>22.4</u>		
<u>1028</u>	<u>2.5</u>	<u>7.25</u>	<u>2309</u>	<u>22.7</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-5</u>	<u>7</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>KIFF</u>	<u>TPH-JET FUEL/TPH-MO/TPH-DROW/sgc(8015)/TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260)</u>

COMMENTS: 8" MORRIS

Add/Replaced Lock: X Add/Replaced Plug: X 2" Add/Replaced Bolt: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Rolls Royce Engine Test Job Number: 25-948218.1
 Site Address: 6701 Old Earhart Road Event Date: 02-25-13 (inclusive)
 City: Oakland, CA Sampler: AM

Well ID: MW-6 Date Monitored: 03-25-13
 Well Diameter: 2 1/4 in.
 Total Depth: 10.66 ft.
 Depth to Water: 5.64 ft. Check if water column is less than 0.50 ft.
5.02 x VF .17 = .85 x3 case volume = Estimated Purge Volume: 2.56 gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 6.64

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Purge Equipment:
 Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____
 Product Transferred to: _____

Start Time (purge): 1120 Weather Conditions: overcast
 Sample Time/Date: 1150 02-25-13 Water Color: clear Odor: Y / N
 Approx. Flow Rate: - gpm. Sediment Description: clear
 Did well de-water? - If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 5.89

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm / µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1124</u>	<u>1</u>	<u>7.69</u>	<u>1456</u>	<u>17.4</u>	<u>-</u>	
<u>1127</u>	<u>2</u>	<u>7.60</u>	<u>1449</u>	<u>17.3</u>		
<u>1130</u>	<u>3</u>	<u>7.55</u>	<u>1442</u>	<u>17.3</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-6</u>	<u>7</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>KIFF</u>	<u>TPH-JET FUEL/TPH-MO/TPH-DROW/sgc(8015)/TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260)</u>

COMMENTS: MARRIEN 8" / 2' 13



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Rolls Royce Engine Test
 Site Address: 6701 Old Earhart Road
 City: Oakland, CA

Job Number: 25-948218.1
 Event Date: 3/25/13 (inclusive)
 Sampler: JH

Well ID: MW-7
 Well Diameter: 2.14 in.
 Total Depth: 10.08 ft.
 Depth to Water: 5.48 ft.
4.60 xVF .17 = .78

Date Monitored: 3/25/13

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge ((Height of Water Column x 0.20) + DTW): 6.40

Purge Equipment:

Disposable Bailer X
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer X
 Pressure Bailer _____
 Discrete Bailer _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____
 Product Transferred to: _____

Start Time (purge): 1110 Weather Conditions: cloudy
 Sample Time/Date: 1150 / 3/25/13 Water Color: cloudy Odor: Y/N 2.5/10
 Approx. Flow Rate: _____ gpm. Sediment Description: 2.5/10
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 6.28

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - <u>S</u>)	Temperature (°C / F)	D.O. (mg/L)	ORP (mV)
<u>1113</u>	<u>1</u>	<u>7.45</u>	<u>2261</u>	<u>19.8</u>	_____	_____
<u>1117</u>	<u>2</u>	<u>7.39</u>	<u>2243</u>	<u>19.6</u>	_____	_____
<u>1120</u>	<u>2.5</u>	<u>7.30</u>	<u>2217</u>	<u>19.5</u>	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-7</u>	<u>7</u> x voa vial	YES	HCL	KIFF	TPH-JET FUEL/TPH-MO/TPH-DROw/sgc(8015)/TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260)

COMMENTS: 8" MORRIS

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Add/Replaced Bolt: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Rolls Royce Engine Test Job Number: 25-948218.1
 Site Address: 6701 Old Earhart Road Event Date: 03-25-13 (inclusive)
 City: Oakland, CA Sampler: AM

Well ID: MW-8 Date Monitored: 03-25-13
 Well Diameter: 2.4 in.
 Total Depth: 9.79 ft.
 Depth to Water: 4.31 ft. Check if water column is less than 0.50 ft.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.40
 $5.48 \times VF .17 = .93$ x3 case volume = Estimated Purge Volume: 2.79 gal.

Purge Equipment:

Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____
 Product Transferred to: _____

Start Time (purge): 0903 Weather Conditions: overcast
 Sample Time/Date: 0925 / 03-25-13 Water Color: cloudy Odor: Y / N
 Approx. Flow Rate: _____ gpm. Sediment Description: cloudy
 Did well de-water? _____ If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 4.72

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>0906</u>	<u>1</u>	<u>7.78</u>	<u>3999</u>	<u>15.7</u>	-	-
<u>0909</u>	<u>2</u>	<u>7.75</u>	<u>3999</u>	<u>15.7</u>		
<u>0912</u>	<u>3</u>	<u>7.72</u>	<u>3999</u>	<u>15.8</u>		
			<u>OUT OF RANGE</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-8</u>	<u>7</u> x vov vial	YES	HCL	KIFF	TPH-JET FUEL/TPH-MO/TPH-DROw/sgc(8015)/ TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260)

COMMENTS:

MORRISON 8" / 2

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Add/Replaced Bolt: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Rolls Royce Engine Test
 Site Address: 6701 Old Earhart Road
 City: Oakland, CA

Job Number: 25-948218.1
 Event Date: 3.25.13 (inclusive)
 Sampler: FT

Well ID: MW-9
 Well Diameter: Ø14 in.
 Total Depth: 9.95 ft.
 Depth to Water: 5.48 ft.

Date Monitored: 3.25.13

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

4.47 xVF .17 = .75 x3 case volume = Estimated Purge Volume: 2.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 6.37

Purge Equipment:
 Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____
 Product Transferred to: _____

Start Time (purge): 1225
 Sample Time/Date: 1245 / 3.25.13
 Approx. Flow Rate: _____ gpm.
 Did well de-water? NO If yes, Time: _____

Weather Conditions: FDU
 Water Color: CLEAN Odor: DIN STRONG
 Sediment Description: V. SLIGHT SILT
 Volume: _____ gal. DTW @ Sampling: 5.48

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (° / F)	D.O. (mg/L)	ORP (mV)
<u>1228</u>	<u>.75</u>	<u>7.46</u>	<u>1290</u>	<u>18.3</u>	_____	_____
<u>1231</u>	<u>1.5</u>	<u>7.42</u>	<u>1320</u>	<u>17.9</u>	_____	_____
<u>1234</u>	<u>2.0</u>	<u>7.39</u>	<u>1276</u>	<u>17.8</u>	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-9</u>	<u>7</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>KIFF</u>	<u>TPH-JET FUEL/TPH-MO/TPH-DROW/sgc(8015)/TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260)</u>

COMMENTS: MOUNISON 8" OIL

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Add/Replaced Bolt: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Rolls Royce Engine Test Job Number: 25-948218.1
 Site Address: 6701 Old Earhart Road Event Date: 3/25/13 (inclusive)
 City: Oakland, CA Sampler: JOE

Well ID: MW-10 Date Monitored: 3/25/13
 Well Diameter: 2.14 in.
 Total Depth: 10.11 ft.
 Depth to Water: 3.98 ft. Check if water column is less than 0.50 ft.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.20
 $6.13 \times VF 0.17 = 1.04$ x3 case volume = Estimated Purge Volume: 3.12 gal.

Purge Equipment:

Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____
 Product Transferred to: _____

Start Time (purge): 1043 Weather Conditions: Clear
 Sample Time/Date: 1103 / 3/25/13 Water Color: Clear Odor: ⊙ / N Slight
 Approx. Flow Rate: _____ gpm. Sediment Description: None
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 4.00

Time (2400 hr.)	Volume (gal.)	pH	Conductivity ^{MS} (µmhos/cm)	Temperature (° / F)	D.O. (mg/L)	ORP (mV)
<u>1044</u>	<u>1</u>	<u>7.31</u>	<u>5.90</u>	<u>16.0</u>		
<u>1046</u>	<u>2</u>	<u>7.21</u>	<u>5.70</u>	<u>15.9</u>		
<u>1048</u>	<u>3.5</u>	<u>7.26</u>	<u>3.92</u>	<u>16.0</u>		
<u>1054</u>	<u>4.5</u>	<u>7.21</u>	<u>4.67</u>	<u>16.0</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-10</u>	<u>78</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>KIFF</u>	<u>TPH-JET FUEL/TPH-MO/TPH-DROW/sgc(8015)/TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260)</u>

COMMENTS:

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Add/Replaced Bolt: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Rolls Royce Engine Test Job Number: 25-948218.1
 Site Address: 6701 Old Earhart Road Event Date: 3/25/13 (inclusive)
 City: Oakland, CA Sampler: JOE

Well ID: MW-11 Date Monitored: 3/25/13
 Well Diameter: 2.14 in.
 Total Depth: 9.70 ft.
 Depth to Water: 3.80 ft. Check if water column is less than 0.50 ft.
5.99 x VF 0.17 = 1.01 x3 case volume = Estimated Purge Volume: 3.05 gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 4.99

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Purge Equipment:
 Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____
 Product Transferred to: _____

Start Time (purge): 1110 Weather Conditions: overcast
 Sample Time/Date: 1126 / 3/25/13 Water Color: gray Odor: YIN Slight
 Approx. Flow Rate: _____ gpm. Sediment Description: Light
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 3.81

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - pS)	Temperature (°F)	D.O. (mg/L)	ORP (mV)
<u>1112</u>	<u>1</u>	<u>7.02</u>	<u>9.36</u>	<u>14.4</u>		
<u>1113</u>	<u>2</u>	<u>7.05</u>	<u>9.68</u>	<u>14.6</u>		
<u>1115</u>	<u>3</u>	<u>7.05</u>	<u>9.69</u>	<u>14.5</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-1</u>	<u>9</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>KIFF</u>	<u>TPH-JET FUEL/TPH-MO/TPH-DROw/sgc(8015)/TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260)</u>

COMMENTS: _____

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Add/Replaced Bolt: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Rolls Royce Engine Test
 Site Address: 6701 Old Earhart Road
 City: Oakland, CA

Job Number: 25-948218.1
 Event Date: 3-25-13 (inclusive)
 Sampler: FT

Well ID: MW-12
 Well Diameter: 2 1/4 in.
 Total Depth: 9.95 ft.
 Depth to Water: 3.53 ft.
6.42 x VF .17 = 1.09

Date Monitored: 3-25-13

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 4.81 x3 case volume = Estimated Purge Volume: 3.0 gal.

Purge Equipment:

Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____
 Product Transferred to: _____

Start Time (purge): 1040 Weather Conditions: FOW
 Sample Time/Date: 1100 13-25-13 Water Color: CLEAR Odor: D/N STRONG
 Approx. Flow Rate: _____ gpm. Sediment Description: NONE
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 3.56

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - 45)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1043</u>	<u>1.0</u>	<u>7.54</u>	<u>2542</u>	<u>16.7</u>	_____	_____
<u>1046</u>	<u>2.0</u>	<u>7.48</u>	<u>2560</u>	<u>16.8</u>	_____	_____
<u>1049</u>	<u>3.0</u>	<u>7.42</u>	<u>2621</u>	<u>17.0</u>	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-12</u>	<u>7</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>KIFF</u>	<u>TPH-JET FUEL/TPH-MO/TPH-DROW/sgc(8015)/TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260)</u>

COMMENTS: MONITORED 8" (DL)



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Rolls Royce Engine Test Job Number: 25-948218.1
 Site Address: 6701 Old Earhart Road Event Date: 3/25/13 (inclusive)
 City: Oakland, CA Sampler: JOE

Well ID: MW-13
 Well Diameter: 21/8 in.
 Total Depth: 9.53 ft.
 Depth to Water: 2.52 ft.

Date Monitored: 3/25/13

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

7.01 xVF 0.66 = 4.62 x3 case volume = Estimated Purge Volume: 13.87 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 3.92

Purge Equipment:
 Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____
 Product Transferred to: _____

Start Time (purge): 0939 Weather Conditions: Clear
 Sample Time/Date: 1154 13/25/13 Water Color: Clear Odor: ① N Slight
 Approx. Flow Rate: _____ gpm. Sediment Description: None
 Did well de-water? yes If yes, Time: 0952 Volume: 8.5 gal. DTW @ Sampling: 6.75

Time (2400 hr.)	Volume (gal.)	pH	Conductivity ^{MS} (µmhos/cm - µS)	Temperature (° F)	D.O. (mg/L)	ORP (mV)
<u>0945</u>	<u>5</u>	<u>6.90</u>	<u>17.40</u>	<u>17.2</u>		
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-13</u>	<u>7</u> x voa vial	YES	HCL	KIFF	TPH-JET FUEL/TPH-MO/TPH-DROW/sgc(8015)/ TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260)
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

COMMENTS: Did not recover in 2 hrs.

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Add/Replaced Bolt: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Rolls Royce Engine Test Job Number: 25-948218.1
 Site Address: 6701 Old Earhart Road Event Date: 3.25.13 (inclusive)
 City: Oakland, CA Sampler: FR

Well ID: MW-14 Date Monitored: 3.25.13
 Well Diameter: 2 1/4 in.
 Total Depth: 10.05 ft.
 Depth to Water: 2.63 ft.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Depth to Water: 7.42 xVF 17 = 1.26 x3 case volume = Estimated Purge Volume: 4.0 gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 4.11

Purge Equipment:
 Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____
 Product Transferred to: _____

Start Time (purge): 1115 Weather Conditions: FDL
 Sample Time/Date: 1135 13.25.13 Water Color: CLEAN Odor: DI N MODERATE
 Approx. Flow Rate: / gpm. Sediment Description: _____
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 2.63

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - <u>DS</u>)	Temperature (° / F)	D.O. (mg/L)	ORP (mV)
<u>1118</u>	<u>1.5</u>	<u>7.76</u>	<u>2378</u>	<u>16.0</u>	/	/
<u>1121</u>	<u>3.0</u>	<u>7.71</u>	<u>2315</u>	<u>15.9</u>	/	/
<u>1124</u>	<u>4.0</u>	<u>7.67</u>	<u>2280</u>	<u>15.7</u>	/	/

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-14</u>	<u>7</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>KIFF</u>	<u>TPH-JET FUEL/TPH-MO/TPH-DROW/sgc(8015)/TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260)</u>

COMMENTS: MORNING 8" OIL

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Add/Replaced Bolt: _____



GETTLER-RYAN Inc.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Rolls Royce Engine Test
 Site Address: 6701 Old Earhart Road
 City: Oakland, CA

Job Number: 25-948218.1
 Event Date: 3.25.13 (inclusive)
 Sampler: FT

Well ID: MW-15
 Well Diameter: 2 1/4 in.
 Total Depth: 10.00 ft.
 Depth to Water: 4.78 ft.
5.22 xVF .17 = .88

Date Monitored: 3.25.13

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.82 x3 case volume = Estimated Purge Volume: 3.0 gal.

Purge Equipment:
 Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____
 Product Transferred to: _____

Start Time (purge): 1000
 Sample Time/Date: 1020 / 3.25.13
 Approx. Flow Rate: _____ gpm.
 Did well de-water? NO If yes, Time: _____

Weather Conditions: FOL
 Water Color: Cloudy / low Odor: Y / 0
 Sediment Description: None
 Volume: _____ gal. DTW @ Sampling: 5.58

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - <u>US</u>)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1003</u>	<u>1.0</u>	<u>7.37</u>	<u>2420</u>	<u>15.9</u>	/	/
<u>1006</u>	<u>2.0</u>	<u>7.32</u>	<u>2382</u>	<u>16.2</u>	/	/
<u>1009</u>	<u>3.0</u>	<u>7.29</u>	<u>2481</u>	<u>16.7</u>	/	/

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-15</u>	<u>7</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>KIFF</u>	<u>TPH-JET FUEL/TPH-MO/TPH-DROW/sgc(8015)/TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260)</u>

COMMENTS: MORRISON 8" ON



GETTLER-RYAN Inc.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Rolls Royce Engine Test Job Number: 25-948218.1
 Site Address: 6701 Old Earhart Road Event Date: 3.25.13 (inclusive)
 City: Oakland, CA Sampler: FT

Well ID: MW-17
 Well Diameter: 2 1/4 in.
 Total Depth: 9.81 ft.
 Depth to Water: 2.51 ft.
7.30 xVF .17 = 1.24

Date Monitored: 3.25.13

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 3.97 x3 case volume = Estimated Purge Volume: 4.0 gal.

Purge Equipment:

Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____
 Product Transferred to: _____

Start Time (purge): 0900 Weather Conditions: FOL
 Sample Time/Date: 0930 / 3.25.13 Water Color: CLEAN Odor: Y / 10
 Approx. Flow Rate: — gpm. Sediment Description: NONE
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 3.95

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - <u>DS</u>)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>0903</u>	<u>1.5</u>	<u>6.71</u>	<u>1719</u>	<u>13.5</u>	_____	_____
<u>0906</u>	<u>3.0</u>	<u>6.69</u>	<u>1732</u>	<u>14.5</u>	_____	_____
<u>0909</u>	<u>4.0</u>	<u>6.65</u>	<u>1748</u>	<u>14.9</u>	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-17</u>	<u>7</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>KIFF</u>	<u>TPH-JET FUEL/TPH-MO/TPH-DROW/sgc(8015)/TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260)</u>

COMMENTS:

MORMISON 8" (2 SF)
REACTION TO HCL

Add/Replaced Lock: Add/Replaced Plug: (2") Add/Replaced Bolt: 2



GETTLER-RYAN Inc.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Rolls Royce Engine Test Job Number: 25-948218.1
 Site Address: 6701 Old Earhart Road Event Date: 3/25/13 (inclusive)
 City: Oakland, CA Sampler: JOE

Well ID: MW-18 Date Monitored: 3/25/13
 Well Diameter: 214 in.
 Total Depth: 9.95 ft.
 Depth to Water: 3.27 ft.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Depth to Water: 6.68 xVF 0.17 = 1.13 Check if water column is less than 0.50 ft.
 x3 case volume = Estimated Purge Volume: 3.40 gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 4.60

Purge Equipment:

Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: 1201 (2400 hrs)
 Time Completed: 1202 (2400 hrs)
 Depth to Product: 3.12 ft
 Depth to Water: 3.27 ft
 Hydrocarbon Thickness: 0.15 ft
 Visual Confirmation/Description:
Dark Brown
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: 0.15 gal
 Water Removed: 1 gal
 Product Transferred to: Drum

Start Time (purge): 1204 1205 Weather Conditions: Overcast
 Sample Time/Date: 1235 3/25/13 Water Color: gray Odor: QIN Slight
 Approx. Flow Rate: _____ gpm. Sediment Description: Light
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 3.28

Time (2400 hr.)	Volume (gal.)	pH	Conductivity ^{MS} ($\mu\text{mhos/cm} - \mu\text{S}$)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1207</u>	<u>1</u>	<u>8.44</u>	<u>1.42</u>	<u>16.7</u>		
<u>1210</u>	<u>2</u>	<u>8.40</u>	<u>1.40</u>	<u>16.8</u>		
<u>1213</u>	<u>3.5</u>	<u>8.34</u>	<u>1.38</u>	<u>16.7</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-18</u>	<u>7</u> x voa vial	YES	HCL	KIFF	TPH-JET FUEL/TPH-MO/TPH-DROW/sgc(8015)/TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260)

COMMENTS: SPH AND WATER WERE BAILED UNTIL THE SPH LAYER WAS DIMINISHED. THE WELL WAS THEN PURGED AND SAMPLED.

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Add/Replaced Bolt: _____



GETTLER - RYAN Inc.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Rolls Royce Engine Test Job Number: 25-948218.1
 Site Address: 6701 Old Earhart Road Event Date: 3/25/13 (inclusive)
 City: Oakland, CA Sampler: JH

Well ID NPORDMU-3

Date Monitored: 3/25/13

Well Diameter 210 in.

Total Depth 16.46 ft.

Depth to Water 4.35 ft.

12.11

Check if water column is less than 0.50 ft.

xVF .66 = 7.99 x3 case volume = Estimated Purge Volume: 23.97 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 6.77

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump X
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer X
 Pressure Bailer _____
 Discrete Bailer _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____
 Product Transferred to: _____

Start Time (purge): 0920 Weather Conditions: cloudy
 Sample Time/Date: 0955 / 3/25/13 Water Color: clean Odor: Y10
 Approx. Flow Rate: 2 gpm. Sediment Description: none
 Did well de-water? no If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 4.66

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - (S))	Temperature (° / F)	D.O. (mg/L)	ORP (mV)
<u>0924</u>	<u>8</u>	<u>7.29</u>	<u>2495</u>	<u>18.6</u>	_____	_____
<u>0928</u>	<u>16</u>	<u>7.23</u>	<u>2506</u>	<u>19.0</u>	_____	_____
<u>0932</u>	<u>24</u>	<u>7.16</u>	<u>2541</u>	<u>19.2</u>	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>NPORDMU-3</u>	<u>7</u> x voa vial	YES	HCL	KIFF	TPH-JET FUEL/TPH-MO/TPH-DROW/sgc(8015)/TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260)

COMMENTS: 12" Morris
Tubing in well

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Add/Replaced Bolt: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Rolls Royce Engine Test Job Number: 25-948218.1
 Site Address: 6701 Old Earhart Road Event Date: 03-25-13 (inclusive)
 City: Oakland, CA Sampler: AM

Well ID: NFORD MW-4 Date Monitored: 03-25-13
 Well Diameter: (2) 4 in.
 Total Depth: 11.41 ft.
 Depth to Water: 6.23 ft.

Volume	3/4" = 0.02	1" = 0.04	<u>(2)" = 0.17</u>	3" = 0.38
Factor (VF)	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Depth to Water: 5.18 x VF .17 = .88 x3 case volume = Estimated Purge Volume: 2.64 gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 7.26

Purge Equipment:

Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer
 Pressure Bailer _____
 Discrete Bailer _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____
 Product Transferred to: _____

Start Time (purge): 0940 Weather Conditions: overcast
 Sample Time/Date: 10/0 / 03-25-13 Water Color: cloudy Odor: Y / N
 Approx. Flow Rate: - gpm. Sediment Description: cloudy
 Did well de-water? - If yes, Time: - Volume: - gal. DTW @ Sampling: 6.89

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm - μ S)	Temperature (C F)	D.O. (mg/L)	ORP (mV)
<u>0949</u>	<u>1</u>	<u>7.89</u>	<u>3999</u>	<u>15.8</u>		
<u>0952</u>	<u>2</u>	<u>7.83</u>	<u>3999</u>	<u>15.7</u>		
<u>0955</u>	<u>3</u>	<u>7.81</u>	<u>3999</u>	<u>15.7</u>		
			<u>OUT OF RANGE</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>NFORD MW-4</u>	<u>7 x voa vial</u>	<u>YES</u>	<u>HCL</u>	<u>KIFF</u>	<u>TPH-JET FUEL/TPH-MO/TPH-DROw/sgc(8015)/TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260)</u>

COMMENTS: poly tubing in well. MONUMENT WELL

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Add/Replaced Bolt: _____

BAG WEIGHT 20.5 GRAMS



PES Environmental, Inc.
Engineering & Environmental Services

LOCATION: TEST CELL NA

PROJECT:

JOB NO.:

SEPARATE-PHASE HYDROCARBON REMOVAL LOG

Date	Time	Well ID	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness (feet)	Amount of Product Removed	Notes
12/8/10	0930	MW18				421.5 Grams	
12/16/10	1045	MW18				396 Grams	
12/24/10	0940	MW18				403 Grams	
1/12/11	1310	MW18				417 Grams	
1/27/11	0845	MW18				400 Grams	
2/14/11	1320	MW18				421 Grams	
3/2/11	0910	MW18				418 Grams	
3/14/11	1145	MW18				410 Grams	
3/25/11	0845	MW18				427 Grams	
4/4/11	1320	MW18				416 Grams	
4/12/11	1020	MW18				398 Grams	
4/20/11	1310	MW18				412 Grams	

BAG WEIGHT 20.5 GRAMS



PES Environmental, Inc.
Engineering & Environmental Services

LOCATION: TEST CELL RR
PROJECT:
JOB NO.:

SEPARATE-PHASE HYDROCARBON REMOVAL LOG

Date	Time	Well ID	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness (feet)	Amount of Product Removed	Notes
4/27/11	1030	MW18				390 Grams	
5/3/11	1340	MW18				402 Grams	
5/11/11	1240	MW18				408 Grams	
5/17/11	1345	MW18				395 Grams	
5/26/11	0925	MW18				380 Grams	
6/1/11	1310	MW18				405 Grams	
6/9/11	1400	MW18				390 Grams	
6/16/11	0640	MW18				406 Grams	
6/21/11	1345	MW18				399 Grams	
6/22/11	1230	MW18				412 Grams	
7/5/11	1320	MW18				400 Grams	
7/12/11	1140	MW18				392 Grams	

BAG WEIGHTS 20.5 GRAMS



PES Environmental, Inc.
Engineering & Environmental Services

LOCATION: TEST CELL

PROJECT:

JOB NO.:

SEPARATE-PHASE HYDROCARBON REMOVAL LOG

Date	Time	Well ID	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness (feet)	Amount of Product Removed	Notes
7/19/11	1345	MW18				412 Grams	
7/27/11	1220	MW18				390 Grams	
8/4/11	1310	MW18				385 Grams	
8/10/11	1340	MW18				399 Grams	
8/17/11	0700	MW18				427 Grams	
8/25/11	0945	MW18				402 Grams	
9/2/11	0930	MW18				295 Grams	
9/7/11	10:29	MW18				326 Grams	TC
9/13/11	1145	MW18				308 Grams	
9/22/11	8:00	MW18				298 Grams	TC
9/30/11	1730	MW18				302 Grams	
10/7/11	1600	MW18				288 Grams	

Bag weight 20.5 Grams



PES Environmental, Inc.
Engineering & Environmental Services

LOCATION: Test - cell 11
 PROJECT:
 JOB NO.:

SEPARATE-PHASE HYDROCARBON REMOVAL LOG

Date	Time	Well ID	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness (feet)	Amount of Product Removed	Notes
10/19/11	9:04	MW18				423.5 Grams	TC
10/26/11	1310	MW18				401 Grams	
11/02/11	0705	MW18				353.7	
11/8/11	1000	MW18				402 Grams	
11/16/11	1240	MW18				389 Grams	
11/25/11	1000	MW18				370 Grams	
12/1/11	1145	MW18				390 Grams	
12/8/11	1325	MW18				467 Grams	
12/13/11	0930	MW18				400 Grams	
12/20/11	1320	MW18				392 Grams	
1/3/12	1030	MW18				380 Grams	
1/11/12	625 AM	MW18				416 Grams	

BAG WEIGHT
20.5 Grams



PES Environmental, Inc.
Engineering & Environmental Services

LOCATION: TEST CELL RR

PROJECT:

JOB NO.:

SEPARATE-PHASE HYDROCARBON REMOVAL LOG

Date	Time	Well ID	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness (feet)	Amount of Product Removed	Notes
01/18/12	6:20 AM	MW18				362.5 Grams	
1/26/12	1020	MW18				387 Grams	
02/03/12	8:01 AM	MW18				442.5 Grams	
2/9/12	1340	MW18				430 Grams	
2/16/12	1210	MW18				407 Grams	
2/23/12	0940	MW18				416 Grams	
3/1/12	1220	MW18				395 Grams	
3/7/12	6:15 AM	MW18				441 Grams	
3/14/12	6:15 AM	MW18				346.5 Grams	
3/22/12	1000	MW18				374 Grams	
3/28/12	6:30	MW18				419 Grams	
4/4/12	6:15	MW18				414 Grams	

BAG WEIGHTS
20.5 GRAMS



PES Environmental, Inc.
Engineering & Environmental Services

LOCATION: TEST COU RR
PROJECT:
JOB NO.:

SEPARATE-PHASE HYDROCARBON REMOVAL LOG

Date	Time	Well ID	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness (feet)	Amount of Product Removed	Notes
4/11/12	6:24	MW18				410 Grams	
4/18/12	6:14	MW18				320	
4/25/12	0700	MW18				405 Grams	
5/2/12	0620	MW18				390 Grams	
5/7/12	0620	MW18				404 Grams	
5/11/12	0700	MW18				394 Grams	
5/16/12	6:06	MW18				339.5 Grams	
5/24/12	6:04	MW18				379.5 Grams	
5/30/12	6:15	MW18				351.5 Grams	
6/6/12	0620	MW18				382 Grams	
6/13/12	0609	MW18				321.5 Grams	
6/20/12	0609	MW18				326.5 Grams	

Bag weight new BAC
20.5 grams / 8 grams



PES Environmental, Inc.
Engineering & Environmental Services

LOCATION: *Test cell RR*

PROJECT:

JOB NO.:

SEPARATE-PHASE HYDROCARBON REMOVAL LOG

Date	Time	Well ID	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness (feet)	Amount of Product Removed	Notes
6/27/12	6:10am	MW18				910.00	
7/5/12	6:10am	MW18				327.5	
7/11/12	6:10am	MW18				36.5	
7/19/12	6:10am	MW18				418.5	
7/25/12	6:10am	MW18				321.5	
8/2/12	6:10am	MW18				345.0	
8/8/12	6:10	MW18				333.5	
8/15/12	6:12	MW18				335.0	
AUG 22 2012	7:18pm	MW18				253	
8/28/12	7:36am	MW18				249	
9/5/12	6:30am	MW18				248.5	
9/12/12	6:06am	MW18				274.5	

Bag weight 8.grams



PES Environmental, Inc.
Engineering & Environmental Services

LOCATION:	Test Cell R.R.
PROJECT:	
JOB NO.:	

SEPARATE-PHASE HYDROCARBON REMOVAL LOG

Date	Time	Well ID	Depth to Product (feet BTOC)	Depth to Water (feet BTOC)	Product Thickness (feet)	Amount of Product Removed	Notes
1-16-13	6:15	mw18	—	—	—	153	
1-23-13	6:20	mw18	—	—	—	139	
1-30-13	6:15	mw18	—	—	—	153.5	
2-14-13	7:08	mw18	—	—	—	374	
2-20-13	6:15	mw18	—	—	—	340	
2-27-13	6:15	mw18	—	—	—	308.5	
3-14-13	6:15	mw18	—	—	—	202	
3-20-13	6:22	mw18	—	—	—	156	
3-27-13	6:15	mw18	—	—	—	342	
4-3-13	6:35	mw18				502	
4-17-13	6:30	mw18				426	
4-24-13	8:07	mw18				268	



Laboratory Results

Doug Lee
Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, CA 94568

Subject : 20 Water Samples
Project Name : Rolls-Royce Engine Test Facility
Project Number : 25-948218.1

Dear Mr. Lee,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed. Testing procedures comply with the 2003 NELAC and TNI 2009 standards. Laboratory results relate only to the samples tested. This report may be freely reproduced in full, but may only be reproduced in part with the express permission of Kiff Analytical, LLC. Kiff Analytical, LLC is certified by the State of California under the National Environmental Laboratory Accreditation Program (NELAP), lab # 08263CA. If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Troy Turpen

Subject : 20 Water Samples
Project Name : Rolls-Royce Engine Test Facility
Project Number : 25-948218.1

Case Narrative

The Method Reporting Limit for Naphthalene has been increased due to the presence of an interfering compound for sample MW-18.

Surrogate Recovery for sample MW-18 for test method Mod. EPA 8015 was outside of control limits. This may indicate a bias in the analysis due to the sample's matrix or an interference from compounds present in the sample.

Project Name : **Rolls-Royce Engine Test Facility**

Project Number : **25-948218.1**

Sample : **QA**

Matrix : Water

Lab Number : 84462-01

Sample Date :03/25/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/29/13 23:08
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/29/13 23:08
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/29/13 23:08
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/29/13 23:08
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/29/13 23:08
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/29/13 23:08
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/29/13 23:08
1,2-Dichloroethane-d4 (Surr)	99.4		% Recovery	EPA 8260B	03/29/13 23:08
Toluene - d8 (Surr)	106		% Recovery	EPA 8260B	03/29/13 23:08
4-Bromofluorobenzene (Surr)	94.7		% Recovery	EPA 8260B	03/29/13 23:08

Project Name : **Rolls-Royce Engine Test Facility**

Project Number : **25-948218.1**

Sample : **MW-1**

Matrix : Water

Lab Number : 84462-02

Sample Date :03/25/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/29/13 23:41
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/29/13 23:41
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/29/13 23:41
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/29/13 23:41
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/29/13 23:41
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/29/13 23:41
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/29/13 23:41
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	03/29/13 23:41
Toluene - d8 (Surr)	105		% Recovery	EPA 8260B	03/29/13 23:41
4-Bromofluorobenzene (Surr)	98.2		% Recovery	EPA 8260B	03/29/13 23:41
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	04/03/13 22:56
TPH as Jet Fuel	59	50	ug/L	M EPA 8015	04/02/13 17:10
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	04/02/13 17:10
Octacosane (Silica Gel Surr)	102		% Recovery	M EPA 8015	04/03/13 22:56
Octacosane (Diesel Surrogate)	103		% Recovery	M EPA 8015	04/02/13 17:10

Project Name : **Rolls-Royce Engine Test Facility**

Project Number : **25-948218.1**

Sample : **MW-2**

Matrix : Water

Lab Number : 84462-03

Sample Date :03/25/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 00:13
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 00:13
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 00:13
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 00:13
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 00:13
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/30/13 00:13
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 00:13
1,2-Dichloroethane-d4 (Surr)	98.6		% Recovery	EPA 8260B	03/30/13 00:13
Toluene - d8 (Surr)	106		% Recovery	EPA 8260B	03/30/13 00:13
4-Bromofluorobenzene (Surr)	94.0		% Recovery	EPA 8260B	03/30/13 00:13
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	04/03/13 23:31
TPH as Jet Fuel	60	50	ug/L	M EPA 8015	04/02/13 17:44
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	04/02/13 17:44
Octacosane (Silica Gel Surr)	104		% Recovery	M EPA 8015	04/03/13 23:31
Octacosane (Diesel Surrogate)	104		% Recovery	M EPA 8015	04/02/13 17:44

Project Name : **Rolls-Royce Engine Test Facility**

Project Number : **25-948218.1**

Sample : **MW-3**

Matrix : Water

Lab Number : 84462-04

Sample Date :03/25/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 00:46
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 00:46
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 00:46
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 00:46
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 00:46
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/30/13 00:46
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 00:46
1,2-Dichloroethane-d4 (Surr)	99.7		% Recovery	EPA 8260B	03/30/13 00:46
Toluene - d8 (Surr)	106		% Recovery	EPA 8260B	03/30/13 00:46
4-Bromofluorobenzene (Surr)	94.7		% Recovery	EPA 8260B	03/30/13 00:46
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	04/04/13 00:05
TPH as Jet Fuel	760	50	ug/L	M EPA 8015	04/02/13 18:19
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	04/02/13 18:19
Octacosane (Silica Gel Surr)	93.3		% Recovery	M EPA 8015	04/04/13 00:05
Octacosane (Diesel Surrogate)	95.6		% Recovery	M EPA 8015	04/02/13 18:19

Project Name : **Rolls-Royce Engine Test Facility**

Project Number : **25-948218.1**

Sample : **MW-4**

Matrix : Water

Lab Number : 84462-05

Sample Date :03/25/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 01:19
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 01:19
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 01:19
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 01:19
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 01:19
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/30/13 01:19
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 01:19
1,2-Dichloroethane-d4 (Surr)	99.8		% Recovery	EPA 8260B	03/30/13 01:19
Toluene - d8 (Surr)	108		% Recovery	EPA 8260B	03/30/13 01:19
4-Bromofluorobenzene (Surr)	94.8		% Recovery	EPA 8260B	03/30/13 01:19
TPH as Diesel (Silica Gel)	180	50	ug/L	M EPA 8015	04/04/13 00:40
TPH as Jet Fuel	640	50	ug/L	M EPA 8015	04/02/13 18:54
TPH as Motor Oil	170	100	ug/L	M EPA 8015	04/02/13 18:54
Octacosane (Silica Gel Surr)	102		% Recovery	M EPA 8015	04/04/13 00:40
Octacosane (Diesel Surrogate)	103		% Recovery	M EPA 8015	04/02/13 18:54

Project Name : **Rolls-Royce Engine Test Facility**

Project Number : **25-948218.1**

Sample : **MW-5**

Matrix : Water

Lab Number : 84462-06

Sample Date :03/25/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 01:51
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 01:51
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 01:51
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 01:51
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 01:51
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/30/13 01:51
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 01:51
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	03/30/13 01:51
Toluene - d8 (Surr)	107		% Recovery	EPA 8260B	03/30/13 01:51
4-Bromofluorobenzene (Surr)	94.5		% Recovery	EPA 8260B	03/30/13 01:51
TPH as Diesel (Silica Gel) (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)	510	50	ug/L	M EPA 8015	04/04/13 01:15
TPH as Jet Fuel	680	50	ug/L	M EPA 8015	04/04/13 12:14
TPH as Motor Oil	1200	100	ug/L	M EPA 8015	04/04/13 12:14
Octacosane (Silica Gel Surr)	107		% Recovery	M EPA 8015	04/04/13 01:15
Octacosane (Diesel Surrogate)	109		% Recovery	M EPA 8015	04/04/13 12:14

Project Name : **Rolls-Royce Engine Test Facility**

Project Number : **25-948218.1**

Sample : **MW-6**

Matrix : Water

Lab Number : 84462-07

Sample Date :03/25/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 02:24
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 02:24
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 02:24
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 02:24
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 02:24
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/30/13 02:24
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 02:24
1,2-Dichloroethane-d4 (Surr)	99.3		% Recovery	EPA 8260B	03/30/13 02:24
Toluene - d8 (Surr)	108		% Recovery	EPA 8260B	03/30/13 02:24
4-Bromofluorobenzene (Surr)	94.0		% Recovery	EPA 8260B	03/30/13 02:24
TPH as Diesel (Silica Gel) (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)	290	50	ug/L	M EPA 8015	04/04/13 01:49
TPH as Jet Fuel	620	50	ug/L	M EPA 8015	04/02/13 22:23
TPH as Motor Oil	870	100	ug/L	M EPA 8015	04/02/13 22:23
Octacosane (Silica Gel Surr)	104		% Recovery	M EPA 8015	04/04/13 01:49
Octacosane (Diesel Surrogate)	104		% Recovery	M EPA 8015	04/02/13 22:23

Project Name : **Rolls-Royce Engine Test Facility**

Project Number : **25-948218.1**

Sample : **MW-7**

Matrix : Water

Lab Number : 84462-08

Sample Date :03/25/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 02:57
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 02:57
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 02:57
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 02:57
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 02:57
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/30/13 02:57
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 02:57
1,2-Dichloroethane-d4 (Surr)	99.9		% Recovery	EPA 8260B	03/30/13 02:57
Toluene - d8 (Surr)	108		% Recovery	EPA 8260B	03/30/13 02:57
4-Bromofluorobenzene (Surr)	92.6		% Recovery	EPA 8260B	03/30/13 02:57
TPH as Diesel (Silica Gel) (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)	1100	50	ug/L	M EPA 8015	04/04/13 02:24
TPH as Jet Fuel	1800	50	ug/L	M EPA 8015	04/03/13 03:35
TPH as Motor Oil	3900	100	ug/L	M EPA 8015	04/03/13 03:35
Octacosane (Silica Gel Surr)	114		% Recovery	M EPA 8015	04/04/13 02:24
Octacosane (Diesel Surrogate)	110		% Recovery	M EPA 8015	04/03/13 03:35

Project Name : **Rolls-Royce Engine Test Facility**

Project Number : **25-948218.1**

Sample : **MW-8**

Matrix : Water

Lab Number : 84462-09

Sample Date :03/25/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 03:29
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 03:29
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 03:29
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 03:29
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 03:29
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/30/13 03:29
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 03:29
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	03/30/13 03:29
Toluene - d8 (Surr)	108		% Recovery	EPA 8260B	03/30/13 03:29
4-Bromofluorobenzene (Surr)	94.2		% Recovery	EPA 8260B	03/30/13 03:29
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	04/04/13 02:59
TPH as Jet Fuel	300	50	ug/L	M EPA 8015	04/03/13 04:09
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	04/03/13 04:09
Octacosane (Silica Gel Surr)	99.0		% Recovery	M EPA 8015	04/04/13 02:59
Octacosane (Diesel Surrogate)	103		% Recovery	M EPA 8015	04/03/13 04:09

Project Name : **Rolls-Royce Engine Test Facility**

Project Number : **25-948218.1**

Sample : **MW-9**

Matrix : Water

Lab Number : 84462-10

Sample Date :03/25/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 04:02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 04:02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 04:02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 04:02
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 04:02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/30/13 04:02
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 04:02
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	03/30/13 04:02
Toluene - d8 (Surr)	109		% Recovery	EPA 8260B	03/30/13 04:02
4-Bromofluorobenzene (Surr)	93.1		% Recovery	EPA 8260B	03/30/13 04:02
TPH as Diesel (Silica Gel)	870	50	ug/L	M EPA 8015	04/04/13 03:34
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Jet Fuel	1200	100	ug/L	M EPA 8015	04/04/13 13:23
TPH as Motor Oil	2600	100	ug/L	M EPA 8015	04/04/13 13:23
Octacosane (Silica Gel Surr)	107		% Recovery	M EPA 8015	04/04/13 03:34
Octacosane (Diesel Surrogate)	106		% Recovery	M EPA 8015	04/04/13 13:23

Project Name : **Rolls-Royce Engine Test Facility**

Project Number : **25-948218.1**

Sample : **MW-10**

Matrix : Water

Lab Number : 84462-11

Sample Date :03/25/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 04:35
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 04:35
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 04:35
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 04:35
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 04:35
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/30/13 04:35
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 04:35
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	03/30/13 04:35
Toluene - d8 (Surr)	109		% Recovery	EPA 8260B	03/30/13 04:35
4-Bromofluorobenzene (Surr)	92.4		% Recovery	EPA 8260B	03/30/13 04:35
TPH as Diesel (Silica Gel)	120	50	ug/L	M EPA 8015	04/04/13 04:08
(Note: Discrete peaks in Diesel range, atypical for Diesel Fuel.)					
TPH as Jet Fuel	750	50	ug/L	M EPA 8015	04/03/13 04:44
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	04/03/13 04:44
Octacosane (Silica Gel Surr)	109		% Recovery	M EPA 8015	04/04/13 04:08
Octacosane (Diesel Surrogate)	111		% Recovery	M EPA 8015	04/03/13 04:44

Project Name : **Rolls-Royce Engine Test Facility**

Project Number : **25-948218.1**

Sample : **MW-11**

Matrix : Water

Lab Number : 84462-12

Sample Date :03/25/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 05:08
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 05:08
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 05:08
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 05:08
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 05:08
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/30/13 05:08
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 05:08
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	03/30/13 05:08
Toluene - d8 (Surr)	110		% Recovery	EPA 8260B	03/30/13 05:08
4-Bromofluorobenzene (Surr)	92.6		% Recovery	EPA 8260B	03/30/13 05:08
TPH as Diesel (Silica Gel)	230	50	ug/L	M EPA 8015	04/04/13 04:43
TPH as Jet Fuel	1200	50	ug/L	M EPA 8015	04/02/13 22:58
TPH as Motor Oil	450	100	ug/L	M EPA 8015	04/02/13 22:58
Octacosane (Silica Gel Surr)	106		% Recovery	M EPA 8015	04/04/13 04:43
Octacosane (Diesel Surrogate)	111		% Recovery	M EPA 8015	04/02/13 22:58

Project Name : **Rolls-Royce Engine Test Facility**

Project Number : **25-948218.1**

Sample : **MW-12**

Matrix : Water

Lab Number : 84462-13

Sample Date :03/25/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/29/13 20:57
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/29/13 20:57
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/29/13 20:57
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/29/13 20:57
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/29/13 20:57
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/29/13 20:57
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/29/13 20:57
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	03/29/13 20:57
Toluene - d8 (Surr)	105		% Recovery	EPA 8260B	03/29/13 20:57
4-Bromofluorobenzene (Surr)	94.5		% Recovery	EPA 8260B	03/29/13 20:57
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	04/04/13 05:18
TPH as Jet Fuel	73	50	ug/L	M EPA 8015	04/02/13 23:32
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	04/02/13 23:32
Octacosane (Silica Gel Surr)	104		% Recovery	M EPA 8015	04/04/13 05:18
Octacosane (Diesel Surrogate)	108		% Recovery	M EPA 8015	04/02/13 23:32

Project Name : **Rolls-Royce Engine Test Facility**

Project Number : **25-948218.1**

Sample : **MW-13**

Matrix : Water

Lab Number : 84462-14

Sample Date :03/25/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 05:40
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 05:40
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 05:40
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 05:40
Methyl-t-butyl ether (MTBE)	1.4	0.50	ug/L	EPA 8260B	03/30/13 05:40
TPH as Gasoline	170	50	ug/L	EPA 8260B	03/30/13 05:40
(Note: Primarily compounds not found in typical Gasoline)					
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 05:40
1,2-Dichloroethane-d4 (Surr)	99.2		% Recovery	EPA 8260B	03/30/13 05:40
Toluene - d8 (Surr)	109		% Recovery	EPA 8260B	03/30/13 05:40
4-Bromofluorobenzene (Surr)	92.7		% Recovery	EPA 8260B	03/30/13 05:40
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	04/04/13 05:53
TPH as Jet Fuel	610	50	ug/L	M EPA 8015	04/03/13 00:07
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	04/03/13 00:07
Octacosane (Silica Gel Surr)	96.0		% Recovery	M EPA 8015	04/04/13 05:53
Octacosane (Diesel Surrogate)	97.8		% Recovery	M EPA 8015	04/03/13 00:07

Project Name : **Rolls-Royce Engine Test Facility**

Project Number : **25-948218.1**

Sample : **MW-14**

Matrix : Water

Lab Number : 84462-15

Sample Date :03/25/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 06:13
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 06:13
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 06:13
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 06:13
Methyl-t-butyl ether (MTBE)	1.1	0.50	ug/L	EPA 8260B	03/30/13 06:13
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/30/13 06:13
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 06:13
1,2-Dichloroethane-d4 (Surr)	98.7		% Recovery	EPA 8260B	03/30/13 06:13
Toluene - d8 (Surr)	110		% Recovery	EPA 8260B	03/30/13 06:13
4-Bromofluorobenzene (Surr)	94.4		% Recovery	EPA 8260B	03/30/13 06:13
TPH as Diesel (Silica Gel)	160	50	ug/L	M EPA 8015	04/04/13 06:27
TPH as Jet Fuel	2000	50	ug/L	M EPA 8015	04/03/13 00:42
TPH as Motor Oil	640	100	ug/L	M EPA 8015	04/03/13 00:42
Octacosane (Silica Gel Surr)	104		% Recovery	M EPA 8015	04/04/13 06:27
Octacosane (Diesel Surrogate)	108		% Recovery	M EPA 8015	04/03/13 00:42

Project Name : **Rolls-Royce Engine Test Facility**

Project Number : **25-948218.1**

Sample : **MW-15**

Matrix : Water

Lab Number : 84462-16

Sample Date :03/25/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 06:46
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 06:46
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 06:46
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 06:46
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 06:46
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/30/13 06:46
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 06:46
1,2-Dichloroethane-d4 (Surr)	99.0		% Recovery	EPA 8260B	03/30/13 06:46
Toluene - d8 (Surr)	109		% Recovery	EPA 8260B	03/30/13 06:46
4-Bromofluorobenzene (Surr)	93.1		% Recovery	EPA 8260B	03/30/13 06:46
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	04/04/13 07:02
TPH as Jet Fuel	76	50	ug/L	M EPA 8015	04/03/13 01:16
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	04/03/13 01:16
Octacosane (Silica Gel Surr)	103		% Recovery	M EPA 8015	04/04/13 07:02
Octacosane (Diesel Surrogate)	104		% Recovery	M EPA 8015	04/03/13 01:16

Project Name : **Rolls-Royce Engine Test Facility**

Project Number : **25-948218.1**

Sample : **MW-17**

Matrix : Water

Lab Number : 84462-17

Sample Date :03/25/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 07:18
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 07:18
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 07:18
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 07:18
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 07:18
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/30/13 07:18
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 07:18
1,2-Dichloroethane-d4 (Surr)	99.2		% Recovery	EPA 8260B	03/30/13 07:18
Toluene - d8 (Surr)	109		% Recovery	EPA 8260B	03/30/13 07:18
4-Bromofluorobenzene (Surr)	93.9		% Recovery	EPA 8260B	03/30/13 07:18
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	04/04/13 09:20
TPH as Jet Fuel	93	50	ug/L	M EPA 8015	04/03/13 01:51
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	04/03/13 01:51
Octacosane (Silica Gel Surr)	95.8		% Recovery	M EPA 8015	04/04/13 09:20
Octacosane (Diesel Surrogate)	99.9		% Recovery	M EPA 8015	04/03/13 01:51

Project Name : **Rolls-Royce Engine Test Facility**

Project Number : **25-948218.1**

Sample : **MW-18**

Matrix : Water

Lab Number : 84462-18

Sample Date :03/25/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 02:17
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 02:17
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 02:17
Total Xylenes	1.7	0.50	ug/L	EPA 8260B	03/30/13 02:17
Methyl-t-butyl ether (MTBE)	2.2	0.50	ug/L	EPA 8260B	03/30/13 02:17
TPH as Gasoline	740	50	ug/L	EPA 8260B	03/30/13 02:17
Naphthalene	< 0.80	0.80	ug/L	EPA 8260B	03/30/13 02:17
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	03/30/13 02:17
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	03/30/13 02:17
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	03/30/13 02:17
TPH as Diesel (Silica Gel)	35000	50	ug/L	M EPA 8015	04/04/13 09:55
TPH as Jet Fuel	61000	1000	ug/L	M EPA 8015	04/04/13 12:49
TPH as Motor Oil	39000	1000	ug/L	M EPA 8015	04/04/13 12:49
Octacosane (Silica Gel Surr)	133		% Recovery	M EPA 8015	04/04/13 09:55
Octacosane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	04/04/13 12:49

Project Name : **Rolls-Royce Engine Test Facility**

Project Number : **25-948218.1**

Sample : **NPORD-MW-3**

Matrix : Water

Lab Number : 84462-19

Sample Date :03/25/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/29/13 23:42
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/29/13 23:42
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/29/13 23:42
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/29/13 23:42
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/29/13 23:42
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/29/13 23:42
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/29/13 23:42
1,2-Dichloroethane-d4 (Surr)	99.4		% Recovery	EPA 8260B	03/29/13 23:42
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	03/29/13 23:42
4-Bromofluorobenzene (Surr)	95.6		% Recovery	EPA 8260B	03/29/13 23:42
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	04/04/13 10:30
TPH as Jet Fuel	< 50	50	ug/L	M EPA 8015	04/03/13 02:26
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	04/03/13 02:26
Octacosane (Silica Gel Surr)	105		% Recovery	M EPA 8015	04/04/13 10:30
Octacosane (Diesel Surrogate)	104		% Recovery	M EPA 8015	04/03/13 02:26

Project Name : **Rolls-Royce Engine Test Facility**

Project Number : **25-948218.1**

Sample : **NPORD-MW-4**

Matrix : Water

Lab Number : 84462-20

Sample Date :03/25/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 02:51
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 02:51
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 02:51
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 02:51
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 02:51
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/30/13 02:51
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/30/13 02:51
1,2-Dichloroethane-d4 (Surr)	99.9		% Recovery	EPA 8260B	03/30/13 02:51
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	03/30/13 02:51
4-Bromofluorobenzene (Surr)	98.8		% Recovery	EPA 8260B	03/30/13 02:51
TPH as Diesel (Silica Gel)	57	50	ug/L	M EPA 8015	04/04/13 11:05
TPH as Jet Fuel	820	50	ug/L	M EPA 8015	04/03/13 03:00
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	04/03/13 03:00
Octacosane (Silica Gel Surr)	105		% Recovery	M EPA 8015	04/04/13 11:05
Octacosane (Diesel Surrogate)	108		% Recovery	M EPA 8015	04/03/13 03:00

Report Number : 84462

Date : 04/04/2013

QC Report : Method Blank Data

Project Name : **Rolls-Royce Engine Test Facility**

Project Number : **25-948218.1**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed	Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	04/03/2013	Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/29/2013
TPH as Jet Fuel	< 50	50	ug/L	M EPA 8015	04/02/2013	Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/29/2013
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	04/02/2013	Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/29/2013
Octasane (Diesel Surrogate)	98.7		%	M EPA 8015	04/02/2013	Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/29/2013
Octasane (Silica Gel Surr)	112		%	M EPA 8015	04/03/2013	Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/29/2013
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/29/2013	TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/29/2013
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/29/2013	Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/29/2013
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/29/2013	1,2-Dichloroethane-d4 (Surr)	100		%	EPA 8260B	03/29/2013
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/29/2013	4-Bromofluorobenzene (Surr)	99.8		%	EPA 8260B	03/29/2013
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/29/2013	Toluene - d8 (Surr)	101		%	EPA 8260B	03/29/2013
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/29/2013						
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/29/2013						
1,2-Dichloroethane-d4 (Surr)	99.4		%	EPA 8260B	03/29/2013						
4-Bromofluorobenzene (Surr)	98.0		%	EPA 8260B	03/29/2013						
Toluene - d8 (Surr)	102		%	EPA 8260B	03/29/2013						
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/29/2013						
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/29/2013						
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/29/2013						
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/29/2013						
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/29/2013						
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/29/2013						
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	03/29/2013						
1,2-Dichloroethane-d4 (Surr)	101		%	EPA 8260B	03/29/2013						
4-Bromofluorobenzene (Surr)	96.0		%	EPA 8260B	03/29/2013						
Toluene - d8 (Surr)	104		%	EPA 8260B	03/29/2013						

QC Report : Matrix Spike/ Matrix Spike DuplicateProject Name : **Rolls-Royce Engine Test Facility**Project Number : **25-948218.1**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	84462-19	<0.50	40.0	40.0	35.9	35.3	ug/L	EPA 8260B	3/30/13	89.8	88.3	1.71	80-120	25
Ethylbenzene	84462-19	<0.50	40.0	40.0	38.0	37.8	ug/L	EPA 8260B	3/30/13	95.0	94.6	0.490	80-120	25
Methyl-t-butyl ether	84462-19	<0.50	40.1	40.1	36.9	38.4	ug/L	EPA 8260B	3/30/13	92.1	96.0	4.14	69.7-121	25
Naphthalene	84462-19	<0.50	40.0	40.0	35.8	34.3	ug/L	EPA 8260B	3/30/13	89.5	85.8	4.17	70.0-130	25
P + M Xylene	84462-19	<0.50	40.0	40.0	37.3	37.9	ug/L	EPA 8260B	3/30/13	93.2	94.7	1.56	76.8-120	25
Toluene	84462-19	<0.50	40.0	40.0	38.6	37.8	ug/L	EPA 8260B	3/30/13	96.5	94.5	2.10	80-120	25
Benzene	84462-13	<0.50	40.0	40.0	37.8	37.9	ug/L	EPA 8260B	3/29/13	94.6	94.7	0.0664	80-120	25
Ethylbenzene	84462-13	<0.50	40.0	40.0	39.4	40.2	ug/L	EPA 8260B	3/29/13	98.6	100	1.92	80-120	25
Methyl-t-butyl ether	84462-13	<0.50	40.1	40.1	34.0	34.7	ug/L	EPA 8260B	3/29/13	84.8	86.7	2.23	69.7-121	25

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **Rolls-Royce Engine Test Facility**Project Number : **25-948218.1**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Naphthalene	84462-13	<0.50	40.0	40.0	37.9	38.9	ug/L	EPA 8260B	3/29/13	94.7	97.2	2.58	70.0-130	25
P + M Xylene	84462-13	<0.50	40.0	40.0	39.6	40.2	ug/L	EPA 8260B	3/29/13	99.0	100	1.55	76.8-120	25
Toluene	84462-13	<0.50	40.0	40.0	42.3	42.3	ug/L	EPA 8260B	3/29/13	106	106	0.0121	80-120	25
Benzene	84498-06	<0.50	40.0	40.0	36.7	36.0	ug/L	EPA 8260B	3/29/13	91.8	90.0	1.88	80-120	25
Ethylbenzene	84498-06	<0.50	40.0	40.0	37.9	37.1	ug/L	EPA 8260B	3/29/13	94.8	92.9	2.08	80-120	25
Methyl-t-butyl ether	84498-06	<0.50	40.1	40.1	38.3	38.0	ug/L	EPA 8260B	3/29/13	95.7	94.9	0.841	69.7-121	25
Naphthalene	84498-06	<0.50	40.0	40.0	39.2	39.4	ug/L	EPA 8260B	3/29/13	98.1	98.5	0.415	70.0-130	25
P + M Xylene	84498-06	<0.50	40.0	40.0	37.9	37.4	ug/L	EPA 8260B	3/29/13	94.7	93.4	1.38	76.8-120	25
Toluene	84498-06	<0.50	40.0	40.0	37.8	37.3	ug/L	EPA 8260B	3/29/13	94.6	93.2	1.46	80-120	25

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **Rolls-Royce Engine Test Facility**

Project Number : **25-948218.1**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
TPH-D (Si Gel)	BLANK	<50	1000	1000	1000	1010	ug/L	M EPA 8015	4/3/13	100	101	0.226	70-130	25
TPH as Diesel	BLANK	<50	1000	1000	1110	1020	ug/L	M EPA 8015	4/2/13	111	102	8.58	70-130	25

QC Report : Laboratory Control Sample (LCS)

Project Name : **Rolls-Royce Engine Test Facility**Project Number : **25-948218.1**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	39.9	ug/L	EPA 8260B	3/29/13	89.0	80-120
Ethylbenzene	39.9	ug/L	EPA 8260B	3/29/13	94.8	80-120
Methyl-t-butyl ether	40.0	ug/L	EPA 8260B	3/29/13	93.7	69.7-121
Naphthalene	39.9	ug/L	EPA 8260B	3/29/13	87.2	70.0-130
P + M Xylene	39.9	ug/L	EPA 8260B	3/29/13	94.6	76.8-120
TPH as Gasoline	503	ug/L	EPA 8260B	3/29/13	83.5	70.0-130
Toluene	39.9	ug/L	EPA 8260B	3/29/13	96.1	80-120
Benzene	39.9	ug/L	EPA 8260B	3/29/13	90.5	80-120
Ethylbenzene	39.9	ug/L	EPA 8260B	3/29/13	96.2	80-120
Methyl-t-butyl ether	40.0	ug/L	EPA 8260B	3/29/13	85.3	69.7-121
Naphthalene	39.9	ug/L	EPA 8260B	3/29/13	88.6	70.0-130
P + M Xylene	39.9	ug/L	EPA 8260B	3/29/13	96.1	76.8-120
TPH as Gasoline	508	ug/L	EPA 8260B	3/29/13	97.4	70.0-130
Toluene	39.9	ug/L	EPA 8260B	3/29/13	99.6	80-120
Benzene	40.2	ug/L	EPA 8260B	3/29/13	92.9	80-120
Ethylbenzene	40.2	ug/L	EPA 8260B	3/29/13	95.6	80-120
Methyl-t-butyl ether	40.2	ug/L	EPA 8260B	3/29/13	96.1	69.7-121
Naphthalene	40.2	ug/L	EPA 8260B	3/29/13	99.1	70.0-130
P + M Xylene	40.2	ug/L	EPA 8260B	3/29/13	95.7	76.8-120
TPH as Gasoline	506	ug/L	EPA 8260B	3/29/13	95.4	70.0-130

QC Report : Laboratory Control Sample (LCS)

Project Name : **Rolls-Royce Engine Test Facility**

Project Number : **25-948218.1**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Toluene	40.2	ug/L	EPA 8260B	3/29/13	95.6	80-120

84462

Global ID #: T06019775776

Yes
 No



Chain-of-Custody-Record

<p>Direct Bill To: Douglas Lee Gettler-Ryan Inc. 6747 Sierra Court Suite J Dublin, CA 94568</p>	<p>Facility <u>Rolls-Royce Engine Test Facility</u> Facility Address: <u>6701 Old Earhart Road, Oakland, CA</u> Consultant Project #: <u>25-948218.1</u> Consultant Name: <u>GETTLER-RYAN INC.</u> Address: <u>6747 Sierra Court Suite J, Dublin, CA 94568</u> Project Contact: (Name) <u>Douglas Lee</u> (Phone) <u>925-551-7444 x123</u> (e-mail) <u>dlee@grinc.com</u></p>	<p>(Name) <u>Douglas Lee</u> (Phone) <u>925-551-7444 x123</u> Laboratory Name: <u>Kiff Analytical</u> Laboratory Service Order: _____ Laboratory Service Code: _____ Samples Collected by: (Name) <u>Jim Heron</u> Signature: _____</p>
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Sample I.D.	Number of Containers	Matrix S= Soil A=Air W=Water C=Charcoal	DATE/SAMPLE COLLECTION TIME	State Method: <input checked="" type="checkbox"/> CA <input type="checkbox"/> OR <input type="checkbox"/> WA <input type="checkbox"/> NW										Series <input type="checkbox"/> CO <input type="checkbox"/> UT <input type="checkbox"/> ID			Remarks		
				TPH-Jet A Fuel (8015) (HCL)	TPH-MO (8015) (HCL)	TPH-DRO with Silica Gel Cleanup (8015) (HCL)	TPH-GRO/BTEX/MTBE/Naphthalene (8260) (HCL)	TPH-Jet A Fuel (8015) (NP)	TPH-MO (8015) (NP)	TPH-DRO with Silica Gel Cleanup (8015) (NP)	TPH-GRO/BTEX/MTBE/Naphthalene (8260) (NP)								
QA	2	W	3/25/13				X												01
MW-1	7		1230	X	X	X													02
MW-2			1023																03
MW-3			1210																04
MW-4			1100																05
MW-5			1045																06
MW-6			1150																07
MW-7			1150																08
MW-8			0925																09
MW-9			1245																10
MW-10			1103																11
MW-11			1126																12
MW-12			1100																13
MW-13			1154																14

Relinquished By (Signature) 	Organization Gettler-Ryan	Date/Time 3/26/13 0600	Received By (Signature) GETTLER-RYAN FRIDGE	Organization G-RINC	Date/Time 03-26-13	Iced (Y/N) DTDD	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days <u>10 Days</u> As Contracted
Relinquished By (Signature) 	Organization G-RINC	Date/Time 03-28-13	Received By (Signature) _____	Organization _____	Date/Time _____	Iced (Y/N) _____	
Relinquished By (Signature) _____	Organization _____	Date/Time _____	Received For Laboratory By (Signature) 	Organization Kiff Analytical	Date/Time 032813 1120	Iced (Y/N) _____	

1 of 2

84462

Global ID #: T06019775776

Yes
 No



Chain-of-Custody-Record

Facility Rolls-Royce Engine Test Facility
 Facility Address: 6701 Old Earhart Road, Oakland, CA
 Consultant Project #: 25-948218.1
 Consultant Name: GETTLER-RYAN INC.
 Address: 6747 Sierra Court Suite J, Dublin, CA 94568
 Project Contact: (Name) Douglas Lee
 (Phone) 925-551-7444 x123 (e-mail) dlee@grinc.com

(Name) Douglas Lee
 (Phone) 925-551-7444 x123
 Laboratory Name: Kiff Analytical
 Laboratory Service Order: _____
 Laboratory Service Code: _____
 Samples Collected by: (Name) Jim Herron
 Signature: _____

Sample I.D.	Number of Containers	Matrix S= Soil A=Air W=Water C=Charcoal	DATE/SAMPLE COLLECTION TIME	State Method: <input checked="" type="checkbox"/> CA <input type="checkbox"/> OR <input type="checkbox"/> WA <input type="checkbox"/> NW								Series <input type="checkbox"/> CO <input type="checkbox"/> UT <input type="checkbox"/> ID			Remarks	
				TPH-Jet A Fuel (8015) (HCL)	TPH-MO (8015) (HCL)	TPH-DRO with Silica Gel Cleanup (8015) (HCL)	TPH-GRO/BTEX/MTBE/Naphthalene (8260) (HCL)	TPH-Jet A Fuel (8015) (NP)	TPH-MO (8015) (NP)	TPH-DRO with Silica Gel Cleanup (8015) (NP)	TPH-GRO/BTEX/MTBE/Naphthalene (8260) (NP)					
MW-14	7	W	3/25/13 1135	X	X	X	X								EDF NEEDED	Lab Sample No. 15
MW-15			1020													16
MW-17			0930													17
MW-18			1235													18
NPORDMU-3			0955													19
NPORDMU-4			1010													20

Relinquished By (Signature) 	Organization Gettler-Ryan	Date/Time 3/25/13 0600	Received By (Signature) GETTLER-RYAN FRIDGE	Organization G-R INC	Date/Time 03-26-13 0740	Iced (Y/N)	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days <u>As Contracted</u>
Relinquished By (Signature) 	Organization G-R INC	Date/Time 03-25-13 1120	Received By (Signature) 	Organization	Date/Time	Iced (Y/N)	
Relinquished By (Signature) 	Organization	Date/Time	Received For Laboratory By (Signature) 	Kiff Analytical	Date/Time 03/28/13 1120	Iced (Y/N)	

20F2

SAMPLE RECEIPT CHECKLIST

RECEIVER
LJR
Initials

SRG#: 84462 Date: 032813
Project ID: Rolls-Royce Engine Test Facility
Method of Receipt: Courier Over-the-counter Shipper
Shipping Only: FedEx * OnTrac * Greyhound Other *Service level if not Priority or Sunrise (M-F): _____

COC Inspection

Is COC present? Yes No
Custody seals on shipping container? Intact Broken Not present N/A
Is COC Signed by Relinquisher? Yes No Dated? Yes No
Is sampler name legibly indicated on COC? Yes No
Is analysis or hold requested for all samples? Yes No
Is the turnaround time indicated on COC? Yes No
Is COC free of whiteout and uninitialed cross-outs? Yes No, Whiteout No, Cross-outs

Sample Inspection

Coolant Present: 46 Yes No (includes water)
Temperature °C 46 Therm. ID# IR-1 Initial LJR Date/Time 032813/1430 N/A
Are there custody seals on sample containers? Intact Broken Not present
Do containers match COC? Yes No No, COC lists absent sample(s) No, Extra sample(s) present
Are there samples matrices other than soil, water, air or carbon? Yes No
Are any sample containers broken, leaking or damaged? Yes No
Are preservatives indicated? Yes, on sample containers Yes, on COC Not indicated N/A
Are preservatives correct for analyses requested? Yes No N/A
Are samples within holding time for analyses requested? Yes No
Are the correct sample containers used for the analyses requested? Yes No
Is there sufficient sample to perform testing? Yes No
Does any sample contain product, have strong odor or are otherwise suspected to be hot? Yes No
Receipt Details
Matrix WA Container type VOA # of containers received 135
Matrix _____ Container type _____ # of containers received _____
Matrix _____ Container type _____ # of containers received _____
Date and Time Sample Put into Temp Storage Date: 032813 Time: 1438

Quicklog

Are the Sample ID's indicated: On COC On sample container(s) On Both Not indicated
If Sample ID's are listed on both COC and containers, do they all match? Yes No N/A
Is the Project ID indicated: On COC On sample container(s) On Both Not indicated
If project ID is listed on both COC and containers, do they all match? Yes No N/A
Are the sample collection dates indicated: On COC On sample container(s) On Both Not indicated
If collection dates are listed on both COC and containers, do they all match? Yes No N/A
Are the sample collection times indicated: On COC On sample container(s) On Both Not indicated
If collection times are listed on both COC and containers, do they all match? Yes No N/A

COMMENTS: No date on COC for -02 through -14. Per labels, all samples taken on 032513. No sample ID on one VOA for MW-6. Date and time matches COC and VOA was received in a ziploc with all other VOAs for MW-6. LJR 032813.1443