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October 19, 2011

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 October 19, 2011.

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



October 19, 2011

Ms. Donna Drogos
Alameda County Environmental Health Department
1131 Harbor Bay Parkway, Ste. 250
Alameda, California 94502

**Subject: Second Semi-Annual 2011 Event
Groundwater Monitoring and Sampling Report
Rolls-Royce Engine Services Test Facility
6701 Old Earhart Road, Oakland, California
Alameda County Site #RO0002606**

Ms. Drogos,

On behalf of Rolls-Royce Engine Services-Oakland Inc. (R-R), Gettler-Ryan Inc. (GR) has prepared this Second Semi-Annual 2011 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 September 2, 2011, 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 September 2, 2011, 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 0.51 ft of SPH were observed in well MW-18. Approximately 0.16 gallon (600 milliliters) 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.

At the request of R-R, PES Environmental, Incorporated (PES) has been periodically removing SPH present in well MW-18 through the use of absorbent socks. SPH removal logs prepared by PES for the most recent events are attached to this report.

Groundwater monitoring wells MW-1 through MW-15, MW-17, NPORD MW-3 and NPORD MW-4 were purged and sampled on the same date they were monitored. Well MW-18 was not sampled due to presence of 0.51 feet of SPH. 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 September 2, 2011, the groundwater flow direction varied with hydraulic gradients ranging from 0.006 to 0.030 ft/ft. A Potentiometric Map is presented as Figure 3.

Analytical Results

Concentrations of TPHg, TPHd, TPHmo, TPHjf, BTEX, MtBE and naphthalene were reported below the laboratory method detection limits in groundwater samples collected from wells MW-1, MW-2, MW-12, MW-15, MW-17 and NPORD MW-3.

TPHg was detected in the water sample collected from well MW-13 at a concentration of 380 parts per billion (ppb). Concentrations of TPHg were reported below the laboratory method detection limits in water samples collected from the remaining wells.

TPHd was detected in twelve wells at concentrations ranging from 60 ppb in well MW-4 to 2,100 ppb in well MW-7. Concentrations of TPHmo were detected in nine wells at levels ranging from 260 ppb in wells MW-10 and MW-13 to 6,200 ppb in well MW-7. TPHjf was detected in twelve wells at concentrations ranging from 240 ppb in well MW-8 to 1,400 ppb in well MW-13.

BTEX constituents were reported as below the laboratory method detection limits in all of the wells. MtBE was detected in wells MW-3, MW-13 and MW-14 at concentrations of 0.68 ppb, 1.4 ppb and 0.98

ppb, respectively. Naphthalene was detected in well MW-13 at a concentration of 1.4 ppb. TPHg, TPHd, TPHmo and TPHjf concentrations are presented on Figure 4.

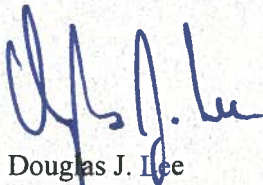
CONCLUSIONS AND RECOMMENDATIONS

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

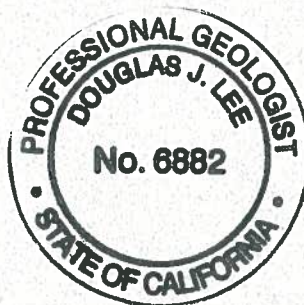
- Petroleum hydrocarbons were not detected in wells MW-1, MW-2, MW-12, MW-15 and NPORD MW-3 located along the northeast edge of the site, and in well MW-17;
- Detectable concentrations of TPHg appear limited to the vicinity of well MW-13;
- Separate-phase hydrocarbons continue to be limited to the vicinity of MW-18;
- Concentrations of TPHd, TPHmo and TPHjf in groundwater samples were consistent with those observed during the previous monitoring and sampling events; 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, 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: Dave Goldberg, Rolls-Royce Engine Services-Oakland Inc
 Dale Klettke, 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-JF (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
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
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

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-JF (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 (cont.)															
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	590¹⁸	<0.50	<0.50	<0.50	<0.50	0.68	<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	490¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
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	310⁶	760	450¹⁸	<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-JF (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	Napthalene (µg/L)	SVOC (µg/L)
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	310⁶	970	260¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
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	2,100⁶	6,200	1,200¹⁸	<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

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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-JF (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	Napthalene (µg/L)	SVOC (µg/L)
MW-8 (cont.)															
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	63⁶	<100	240¹⁸	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
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	250⁶	500	700¹⁸	<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	260²³	890¹⁸	<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	470⁶	990	720¹⁸	<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
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

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MW-13 (cont.)															
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	380¹²	500	260	1,400¹⁸	<0.50	<0.50	<0.50	<0.50	1.4	1.4	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	140⁶	550	900¹⁸	<0.50	<0.50	<0.50	<0.50	0.98	<0.50	NA
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

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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-JF (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	Napthalene (µg/L)	SVOC (µg/L)
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
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										
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

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-JF (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	Napthalene (µg/L)	SVOC (µg/L)
NPORD MW-3 (cont.)															
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
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	320¹⁸	<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

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-JF (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	Napthalene (µg/L)	SVOC (µg/L)
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QA (cont.)

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

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.

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:

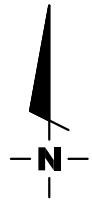
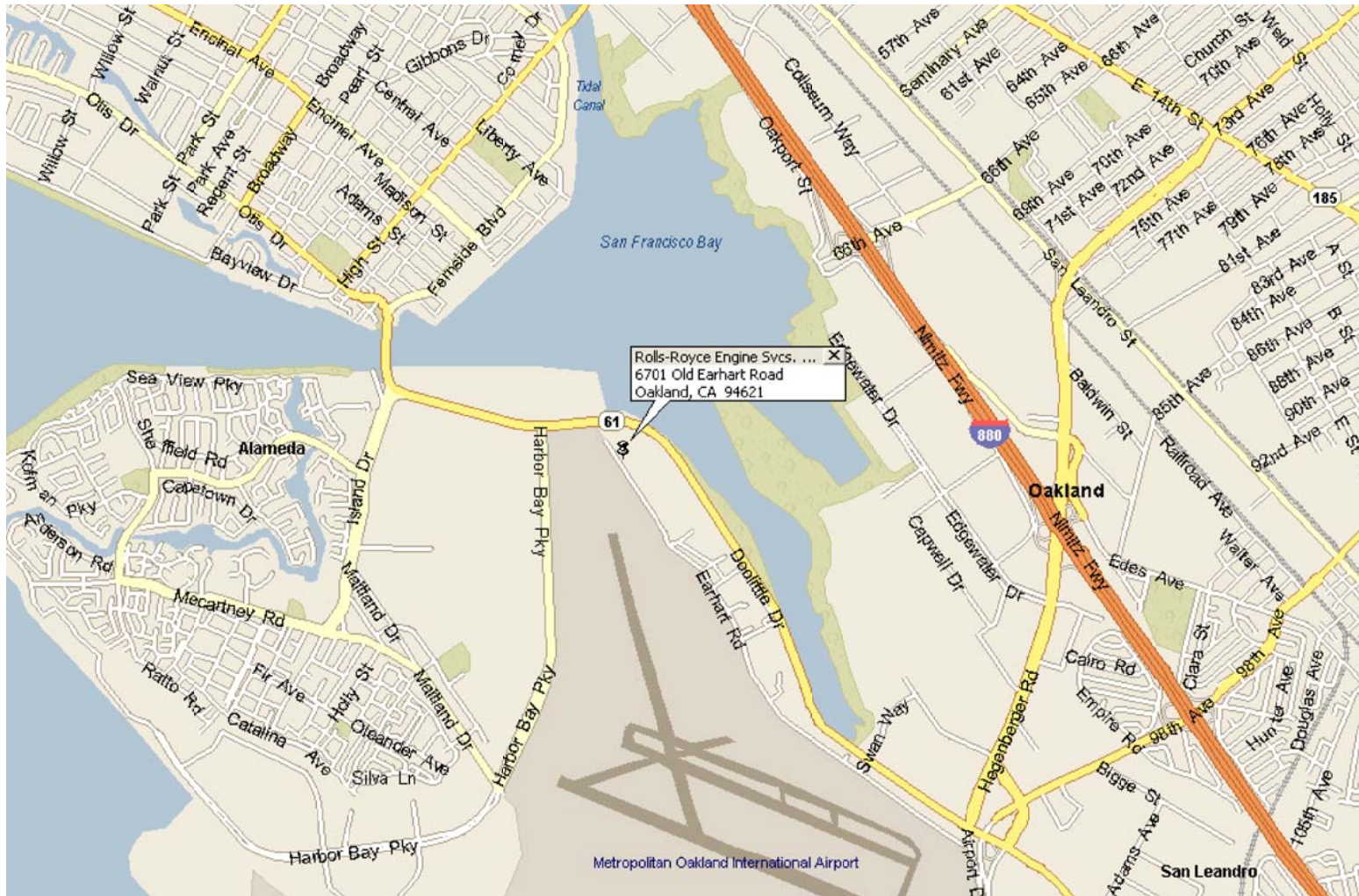
ORP = Oxidation Reduction Potential
D.O. = Dissolved Oxygen
(mV) = Millivolts
($\mu\text{g/L}$) = Micrograms per liter
(mg/L) = Milligrams per liter
-- = Not Measured

ANALYTICAL METHODS:

Nitrate as NO_3 and Sulfate as SO_3 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
Totals:			8.61	3.80



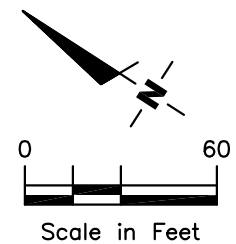
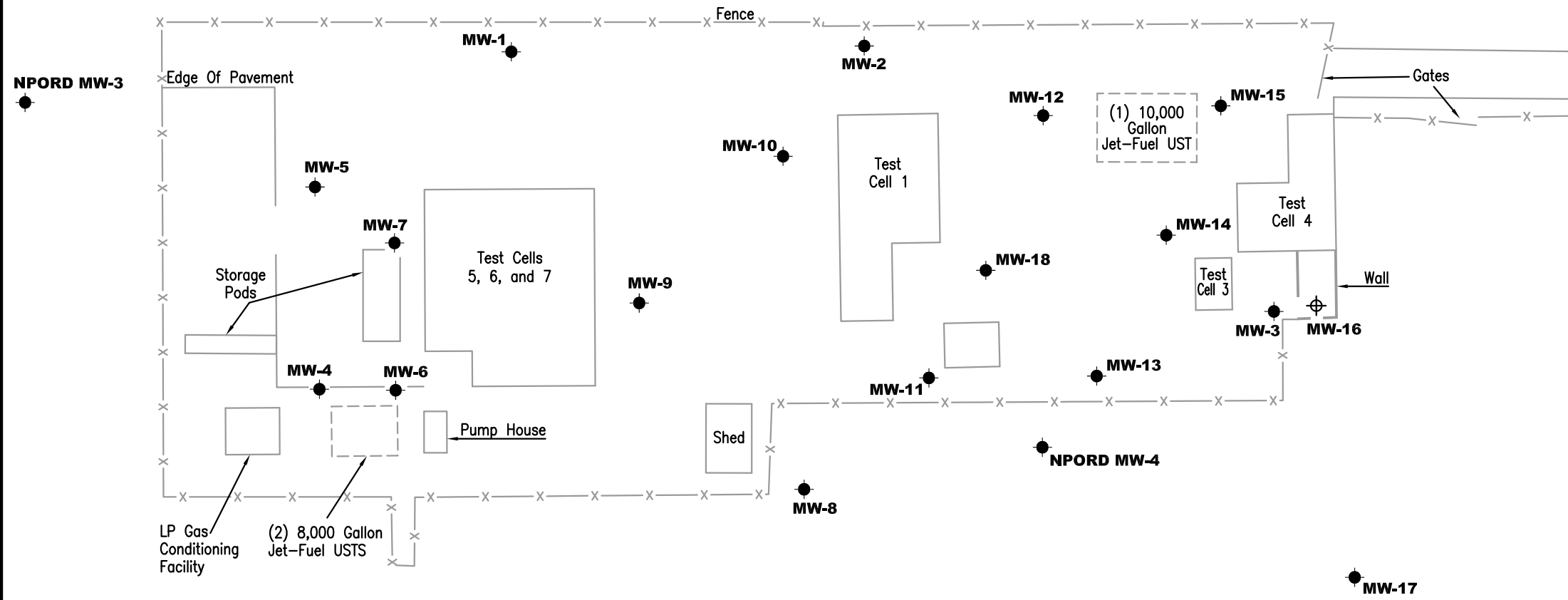
SITE LOCATION MAP
ROLLS-ROYCE ENGINE SERVICES TEST FACILITY
6701 OLD EARHART RD.
OAKLAND, CA

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.

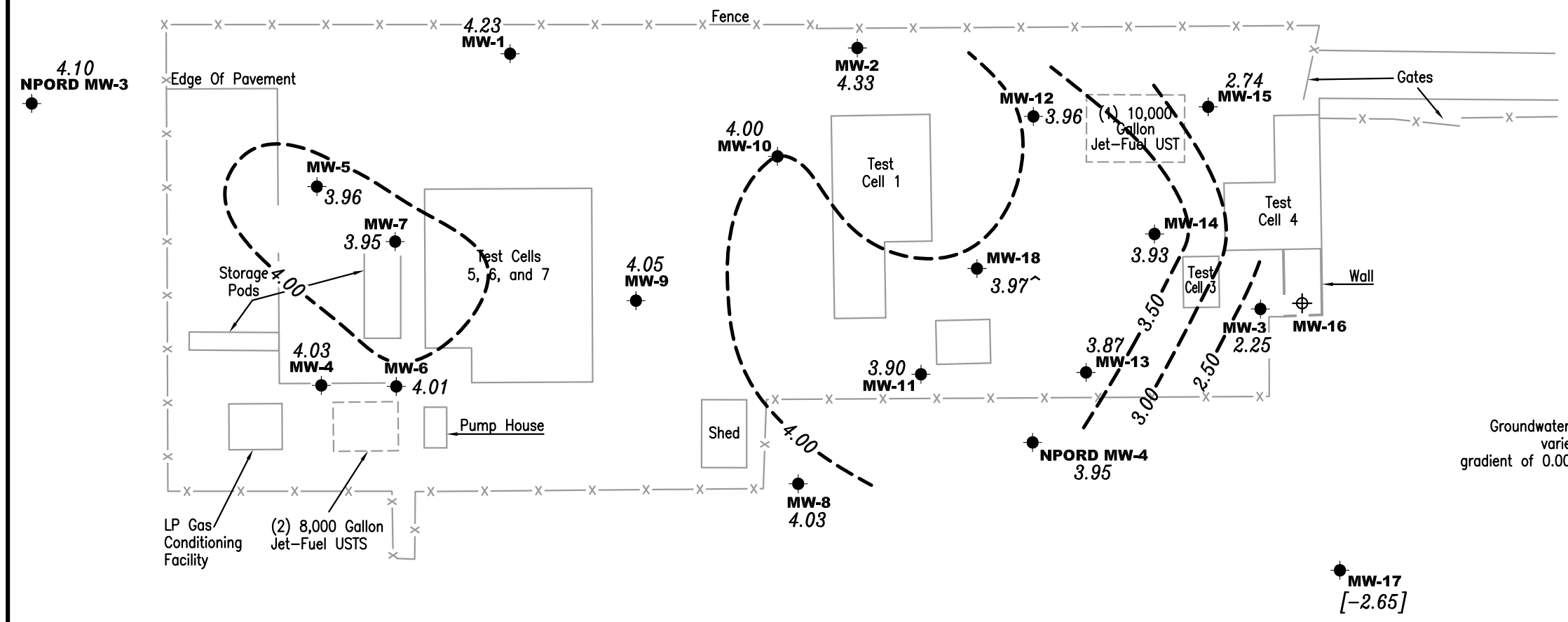
SITE PLAN
 Rolls-Royce Engine Services Test Facility
 6701 Old Earhart Road
 Oakland, CA

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

PROJECT NUMBER: 948218.2
 FILE NAME: P:\Envirow\Rolls-Royce\010-Rolls-Royce.dwg | Layout: Tab: Site Plan
 REVIEWED BY: [Signature]
 DATE: 11/07
 REVISED DATE:

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



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

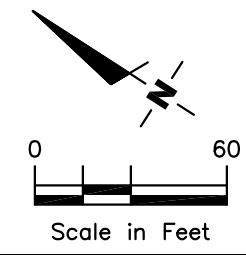
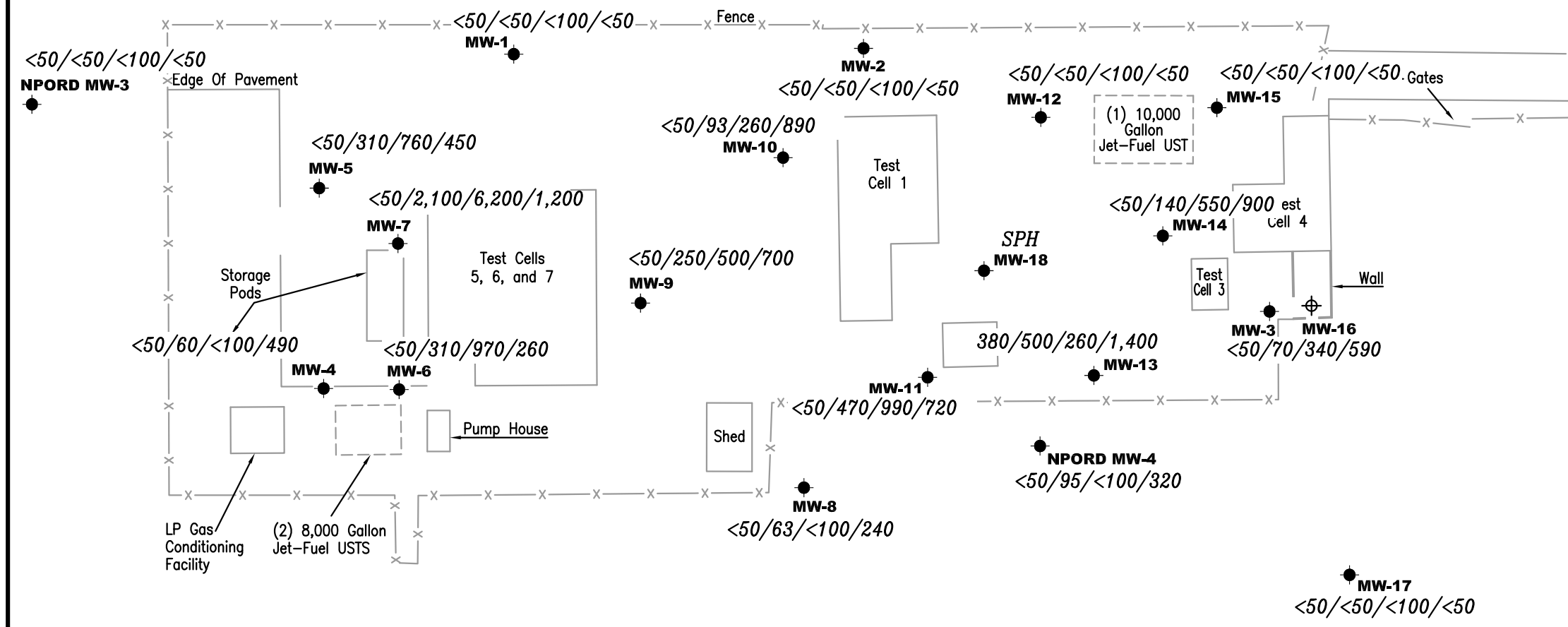
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 6747 Sierra Court, Suite J
 Dublin, CA 94568
 (925) 551-7555

PROJECT NUMBER: 948218
 REVIEWED BY: [Signature]
 DATE: September 2, 2011
 REVISION DATE: [Blank]

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

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 µg/L
- 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

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 Dublin, CA 94568
 (925) 551-7555

PROJECT NUMBER: 948218
 REVIEWED BY: [Signature]
 DATE: September 2, 2011
 REVISED DATE: [Blank]

FILE NAME: P:\Enviroment\Rolls-Royce\011-Rolls-Royce.dwg | Layout: Tab: Con3

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.



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: 9/2/11 (inclusive)
 City: Oakland, CA Sampler: GM

Well ID: MW-1
 Well Diameter: 2.14 in.
 Total Depth: 8.51 ft.
 Depth to Water: 2.94 ft.

Date Monitored: 9/2/11

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 5.57 xVF 0.17 = 0.95 x3 case volume = Estimated Purge Volume: 2.84 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 4.05

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): 1019 Weather Conditions: SUNNY
 Sample Time/Date: 1030 9/2/11 Water Color: CLEAR Odor: (Y) N SLIGHT
 Approx. Flow Rate: NO gpm. Sediment Description: NONE
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 2.96

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
<u>1021</u>	<u>1</u>	<u>6.85</u>	<u>OUT OF RANGE</u>	<u>24.9</u>	_____	_____
<u>1023</u>	<u>2</u>	<u>6.90</u>	<u>↓</u>	<u>25.0</u>	_____	_____
<u>1025</u>	<u>3</u>	<u>6.91</u>	<u>↓</u>	<u>24.9</u>	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-1</u>	<u>7 x vov 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: _____

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: 9/2/11 (inclusive)
 Sampler: GM

Well ID: Mw-2
 Well Diameter: 2 1/4 in.
 Total Depth: 11.78 ft.
 Depth to Water: 2.70 ft.
9.08 xVF 0.17 = 1.54

Date Monitored: 9/2/11

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]: 4.52 x3 case volume = Estimated Purge Volume: 4.63 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): 1150
 Sample Time/Date: 1210 9/2/11
 Approx. Flow Rate: _____ gpm.
 Did well de-water? NO If yes, Time: _____

Weather Conditions: SUNNY
 Water Color: CLOUDY Odor: DIN MODERATE
 Sediment Description: SILT
 Volume: _____ gal. DTW @ Sampling: 3.69

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm) (S)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1152</u>	<u>1.5</u>	<u>6.84</u>	<u>OUT OF RANGE</u>	<u>23.1</u>	_____	_____
<u>1155</u>	<u>3</u>	<u>6.79</u>	<u>↓</u>	<u>22.8</u>	_____	_____
<u>1158</u>	<u>4.75</u>	<u>6.86</u>	<u>↓</u>	<u>22.7</u>	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>Mw-2</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: _____

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: 9-2-11 (inclusive)
 City: Oakland, CA Sampler: ML

Well ID: MW-3 Date Monitored: 9-2-11
 Well Diameter: 214 in.
 Total Depth: 12.10 ft.
 Depth to Water: 4.48 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 7.62 xVF 1.17 = 1.2 x3 case volume = Estimated Purge Volume: 3.6 gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 6.00

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:	_____ gal
Product Transferred to:	_____

Start Time (purge): 1245 Weather Conditions: SUNNY
 Sample Time/Date: 1310 9-2-11 Water Color: clear Odor: 01 N Light
 Approx. Flow Rate: _____ gpm. Sediment Description: light
 Did well de-water? no If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 4.72

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - (S))	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1249</u>	<u>1.25</u>	<u>7.20</u>	<u>OUT RANGE</u>	<u>26.5</u>	_____	_____
<u>1253</u>	<u>2.5</u>	<u>7.13</u>	<u>↓</u>	<u>26.3</u>	_____	_____
<u>1257</u>	<u>3.75</u>	<u>7.14</u>	<u>↓</u>	<u>26.2</u>	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-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:

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: 9/2/11 (inclusive)
 Sampler: JH

Well ID: MW-4
 Well Diameter: 2 1/4 in.
 Total Depth: 10.10 ft.
 Depth to Water: 5.76 ft.
4.34 xVF .17 = .73

Date Monitored: 9/2/11

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]: 6.62 Estimated Purge Volume: 2.21 gal.

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): 1245 Weather Conditions: Clear
 Sample Time/Date: 1310 / 9/2/11 Water Color: Cloudy Odor: Y10
 Approx. Flow Rate: - gpm. Sediment Description: Light
 Did well de-water? N If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 6.60

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1247</u>	<u>.75</u>	<u>7.59</u>	<u>out of Range</u>	<u>21.2</u>		
<u>1249</u>	<u>1.5</u>	<u>7.44</u>	<u>↓</u>	<u>21.0</u>		
<u>1251</u>	<u>2.0</u>	<u>7.26</u>		<u>20.7</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-4</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
 Site Address: 6701 Old Earhart Road
 City: Oakland, CA

Job Number: 25-948218.1
 Event Date: 9/2/11 (inclusive)
 Sampler: GM

Well ID: MW-5
 Well Diameter: 24 in.
 Total Depth: 9.84 ft.
 Depth to Water: 4.39 ft.
5.45 xVF 0.17 = 0.93

Date Monitored: 9/2/11

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.

x3 case volume = Estimated Purge Volume: 2.78 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.48

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): 0947
 Sample Time/Date: 0955 / 9/2/11
 Approx. Flow Rate: _____ gpm.
 Did well de-water? NO If yes, Time: _____

Weather Conditions: SUNNY
 Water Color: CLOUDY Odor: DIRTY MODERATE
 Sediment Description: SILT
 Volume: _____ gal. DTW @ Sampling: 5.06

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - <u>5</u>)	Temperature (°F)	D.O. (mg/L)	ORP (mV)
<u>0949</u>	<u>1</u>	<u>6.59</u>	<u>out of range</u>	<u>22.5</u>	_____	_____
<u>0951</u>	<u>2</u>	<u>6.62</u>	<u>↓</u>	<u>22.4</u>	_____	_____
<u>0953</u>	<u>3</u>	<u>6.61</u>	<u>↓</u>	<u>22.3</u>	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-5</u>	<u>7 x vov vial</u>	<u>YES</u>	<u>HCL</u>	<u>KIFF</u>	<u>TPH-JET FUEL/TPH-MO/TPH-DR0w/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: 9/2/11 (inclusive)
 Sampler: JH

Well ID: MW-6
 Well Diameter: 214 in.
 Total Depth: 10.10 ft.
 Depth to Water: 5.50 ft.

Date Monitored: 9/2/11

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.

4.60 xVF .17 = .78 x3 case volume = Estimated Purge Volume: 2.34 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 6.42

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:	_____ gal
Product Transferred to:	_____

Start Time (purge): 1210
 Sample Time/Date: 1235 / 9/2/11
 Approx. Flow Rate: — gpm.
 Did well de-water? NO If yes, Time: _____

Weather Conditions: Clear
 Water Color: Cloudy Odor: Y10
 Sediment Description: L.S.H.
 Volume: _____ gal. DTW @ Sampling: 6.40

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - 15)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1213</u>	<u>1</u>	<u>7.68</u>	<u>2057</u>	<u>20.7</u>		
<u>1216</u>	<u>2</u>	<u>7.60</u>	<u>2088</u>	<u>20.4</u>		
<u>1218</u>	<u>2.5</u>	<u>7.43</u>	<u>2105</u>	<u>20.3</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-6</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: 9/2/11 (inclusive)
 City: Oakland, CA Sampler: JH

Well ID: MW-7 Date Monitored: 9/2/11
 Well Diameter: 2 1/4 in.
 Total Depth: 10.08 ft.
 Depth to Water: 5.28 ft. Check if water column is less than 0.50 ft.
4.80 xVF .17 = .81 x3 case volume = Estimated Purge Volume: 2.44 gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 6.24

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 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): 1320 Weather Conditions: Clean
 Sample Time/Date: 1345 / 9/2/11 Water Color: cloudy Odor: Y/N
 Approx. Flow Rate: _____ gpm. Sediment Description: Light
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 6.15

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1323</u>	<u>.75</u>	<u>7.43</u>	<u>out of Range</u>	<u>20.9</u>		
<u>1326</u>	<u>1.5</u>	<u>7.20</u>	<u>↓</u>	<u>20.5</u>		
<u>1329</u>	<u>2.5</u>	<u>7.15</u>	<u>↓</u>	<u>20.4</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: _____

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: 9/2/11 (inclusive)
 Sampler: JH

Well ID: MW-8
 Well Diameter: 2 1/4 in.
 Total Depth: 9.80 ft.
 Depth to Water: 4.22 ft.

Date Monitored: 9/2/11

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: 5.58 xVF .17 = .94 Check if water column is less than 0.50 ft.
 x3 case volume = Estimated Purge Volume: 2.84 gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.33

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): 1005 Weather Conditions: clear
 Sample Time/Date: 1040 / 9/2/11 Water Color: cloudy Odor: Y10
 Approx. Flow Rate: - gpm. Sediment Description: L.s. / hr
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 5.07

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm) (US)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1008</u>	<u>1</u>	<u>7.64</u>	<u>at or near</u>	<u>19.8</u>		
<u>1012</u>	<u>2</u>	<u>7.60</u>	<u>↓</u>	<u>20.1</u>		
<u>1016</u>	<u>3</u>	<u>7.82</u>		<u>20.3</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-8</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: 9/2/11 (inclusive)
 City: Oakland, CA Sampler: GM

Well ID: MW-9 Date Monitored: 9/2/11
 Well Diameter: 2.14 in.
 Total Depth: 9.96 ft.
 Depth to Water: 5.39 ft. Check if water column is less than 0.50 ft.
4.57 xVF 0.17 = 0.78 x3 case volume = Estimated Purge Volume: 2.33 gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 6.30

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 / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____
 Product Transferred to: _____

Start Time (purge): 1052 Weather Conditions: Sunny
 Sample Time/Date: 1100 9/2/11 Water Color: CLOUDY Odor: NO IN STRONG
 Approx. Flow Rate: _____ gpm. Sediment Description: SILT
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 5.97

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - 10)	Temperature (°F)	D.O. (mg/L)	ORP (mV)
<u>1054</u>	<u>.75</u>	<u>6.84</u>	<u>2497</u>	<u>24.3</u>		
<u>1056</u>	<u>1.5</u>	<u>6.79</u>	<u>2557</u>	<u>24.1</u>		
<u>1057</u>	<u>2.5</u>	<u>6.76</u>	<u>2299</u>	<u>23.9</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: _____

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: 9/2/11 (inclusive)
 Sampler: GM

Well ID: MW-10
 Well Diameter: 214 in.
 Total Depth: 10.13 ft.
 Depth to Water: 3.51 ft.

Date Monitored: 9/2/11

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 Check if water column is less than 0.50 ft.

6.62 xVF 0.17 = 1.13 x3 case volume = Estimated Purge Volume: 3.38 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 4.83

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): 1127

Weather Conditions: Sunny

Sample Time/Date: 1135 9/2/11

Water Color: cloudy Odor: Y/N STRONG

Approx. Flow Rate: _____ gpm.

Sediment Description: SILT

Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 4.24

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - US)	Temperature (°F)	D.O. (mg/L)	ORP (mV)
<u>1129</u>	<u>1</u>	<u>6.73</u>	<u>OUT OF RANGE</u>	<u>24.2</u>	_____	_____
<u>1131</u>	<u>2.25</u>	<u>6.74</u>	<u>↓</u>	<u>24.4</u>	_____	_____
<u>1133</u>	<u>3.5</u>	<u>6.70</u>	<u>↓</u>	<u>24.1</u>	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-10</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: _____

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: 9-2-11 (inclusive)
 City: Oakland, CA Sampler: ML

Well ID: MW-11
 Well Diameter: 2 1/4 in.
 Total Depth: 10.02 ft.
 Depth to Water: 3.70 ft.

Date Monitored: 9-2-11

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]: 4.96
 xVF 1.17 = 1.0 x3 case volume = Estimated Purge Volume: 3 gal.

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): 1200 Weather Conditions: SUNNY
 Sample Time/Date: 1230 9-2-11 Water Color: Clear Odor: ① N Light
 Approx. Flow Rate: _____ gpm. Sediment Description: light
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 4.02

Time (2400 hr.)	Volume (gal.)	pH	Conductivity ^{MS} (µmhos/cm - µS)	Temperature (° F)	D.O. (mg/L)	ORP (mV)
<u>1203</u>	<u>1</u>	<u>7.10</u>	<u>12.22</u>	<u>25.4</u>	_____	_____
<u>1206</u>	<u>2</u>	<u>7.20</u>	<u>12.24</u>	<u>25.2</u>	_____	_____
<u>1209</u>	<u>3</u>	<u>7.22</u>	<u>12.25</u>	<u>25.1</u>	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-11</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
 Site Address: 6701 Old Earhart Road
 City: Oakland, CA

Job Number: 25-948218.1
 Event Date: 9/2/11 (inclusive)
 Sampler: Gur

Well ID: mw-12
 Well Diameter: 214 in.
 Total Depth: 9.90 ft.
 Depth to Water: 3.36 ft.

Date Monitored: 9/2/11

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]: 4.67
 Check if water column is less than 0.50 ft.
 $6.54 \times VF \ 0.17 = 1.11$ x3 case volume = Estimated Purge Volume: 3.34 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): 1243
 Sample Time/Date: 1300 9/2/11
 Approx. Flow Rate: _____ gpm.
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal.

Weather Conditions: Sunny
 Water Color: 52 CLOUDY Odor: (Y) N MODERATE
 Sediment Description: SILT
 DTW @ Sampling: 4.67

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - <u>S</u>)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1246</u>	<u>1</u>	<u>6.81</u>	<u>OUT OF RANGE</u>	<u>24.8</u>		
<u>1248</u>	<u>2.25</u>	<u>6.80</u>	<u>↓</u>	<u>24.4</u>		
<u>1250</u>	<u>3.5</u>	<u>6.80</u>		<u>24.1</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-12</u>	<u>7 x vovial</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: _____

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: 9-2-11 (inclusive)
 City: Oakland, CA Sampler: ML

Well ID: MW-13 Date Monitored: 9-2-11
 Well Diameter: 2 1/4 in.
 Total Depth: 9.48 ft.
 Depth to Water: 2.23 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]: 3.68
 $7.25 \times VF = 4.7$ x3 case volume = Estimated Purge Volume: 14.1 gal.

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump X
 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): 1135 Weather Conditions: Sunny
 Sample Time/Date: 1330 19-2-11 Water Color: clear Odor: light
 Approx. Flow Rate: _____ gpm. Sediment Description: light
 Did well de-water? YES If yes, Time: 1144 Volume: 9 gal. DTW @ Sampling: 3.01

Time (2400 hr.)	Volume (gal.)	pH	Conductivity ^{MS} (umhos/cm) (uS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1140</u>	<u>5</u>	<u>6.85</u>	<u>12.11</u>	<u>25.6</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: _____

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: 9-2-11 (inclusive)
 City: Oakland, CA Sampler: ML

Well ID: MW-14
 Well Diameter: 2 1/4 in.
 Total Depth: 10.03 ft.
 Depth to Water: 2.49 ft.

Date Monitored: 9-2-11

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]: 3.99
 xVF .17 = 1.2 x3 case volume = Estimated Purge Volume: 3.6 gal.

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): 1055 Weather Conditions: SUNNY
 Sample Time/Date: 1120 19-2-11 Water Color: CLOUDY Odor: 0 IN Light
 Approx. Flow Rate: _____ gpm. Sediment Description: None
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 2.61

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1059</u>	<u>1.25</u>	<u>6.95</u>	<u>OUT RANGE</u>	<u>24.9</u>	_____	_____
<u>1103</u>	<u>2.5</u>	<u>6.99</u>	<u>↓</u>	<u>24.9</u>	_____	_____
<u>1107</u>	<u>3.75</u>	<u>7.01</u>	_____	<u>25.0</u>	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-14</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: 9-2-11 (inclusive)
 City: Oakland, CA Sampler: ML

Well ID: MW-15
 Well Diameter: 2.4 in.
 Total Depth: 9.97 ft.
 Depth to Water: 4.77 ft.
5.20 xVF 0.17 = 0.8

Date Monitored: 9-2-11

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]: 5.81 x3 case volume = Estimated Purge Volume: 2.4 gal.

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:	_____ gal
Product Transferred to:	_____

Start Time (purge): 0900 Weather Conditions: Sunny
 Sample Time/Date: 0925/9-2-11 Water Color: Cloudy Odor: YIN
 Approx. Flow Rate: _____ gpm. Sediment Description: None
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 4.96

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - pS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>0903</u>	<u>1</u>	<u>7.14</u>	<u>OUT RANGE</u>	<u>26.1</u>		
<u>0906</u>	<u>2</u>	<u>7.20</u>	<u>↓</u>	<u>26.2</u>		
<u>0909</u>	<u>2.5</u>	<u>7.21</u>		<u>26.2</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-15</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: 9-2-11 (inclusive)
 City: Oakland, CA Sampler: ML

Well ID: MW-17
 Well Diameter: 14 in.
 Total Depth: 9.81 ft.
 Depth to Water: 2.69 ft.

Date Monitored: 9-2-11

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]: 4.11
 xVF 1.7 = 1.2 x3 case volume = Estimated Purge Volume: 3.6 gal.

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): 0940 Weather Conditions: Sunny
 Sample Time/Date: 1005 9-2-11 Water Color: Clear Odor: Y/N
 Approx. Flow Rate: _____ gpm. Sediment Description: None
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 2.96

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - 25)	Temperature (°F)	D.O. (mg/L)	ORP (mV)
<u>0944</u>	<u>1.25</u>	<u>7.01</u>	<u>OUT RANGE</u>	<u>25.6</u>		
<u>0948</u>	<u>2.5</u>	<u>7.08</u>	<u>✓</u>	<u>25.4</u>		
<u>0952</u>	<u>3.75</u>	<u>7.09</u>	<u>✓</u>	<u>25.4</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-17</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: 9-2-11 (inclusive)
 City: Oakland, CA Sampler: ML

Well ID: MW-18
 Well Diameter: (2) 4 in.
 Total Depth: 9.95 ft.
 Depth to Water: 3.49 ft.

Date Monitored: 9-2-11

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.

6 xVF 1 = 6 x3 case volume = Estimated Purge Volume: 6 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 6

Purge Equipment:

Disposable Bailer X
 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: 1020 (2400 hrs)
 Time Completed: 1040 (2400 hrs)
 Depth to Product: 2.98 ft
 Depth to Water: 3.49 ft
 Hydrocarbon Thickness: 0.51 ft
 Visual Confirmation/Description:
THICK BLACK
 Skimmer / ~~Absorbent Sock~~ (circle one)
 Amt Removed from Skimmer: 0 gal
 Amt Removed from Well: 600 ml gal
 Water Removed: 1 Liter
 Product Transferred to: Down on site

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

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-18</u>	<u>2</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: SPH

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: 9/2/11 (inclusive)
 Sampler: JH

Well ID NPORD MW-3

Date Monitored: 9/2/11

Well Diameter 2 1/4 in.

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

Total Depth 16.44 ft.

Depth to Water 4.10 ft.

Check if water column is less than 0.50 ft.

12.34 xVF .66 = 8.14 x3 case volume = Estimated Purge Volume: 24.43 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 6.56

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump Y
 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): 1105
 Sample Time/Date: 1150 / 9/2/11
 Approx. Flow Rate: 1 gpm.
 Did well de-water? no If yes, Time: _____

Weather Conditions: Clear
 Water Color: cloudy Odor: Y/N
 Sediment Description: Light
 Volume: _____ gal. DTW @ Sampling: 6.24

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm (µS))	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1113</u>	<u>8</u>	<u>7.59</u>	<u>out of range</u>	<u>19.9</u>	_____	_____
<u>1121</u>	<u>16</u>	<u>7.50</u>	<u>↓</u>	<u>20.1</u>	_____	_____
<u>1130</u>	<u>24.5</u>	<u>7.37</u>	<u>↓</u>	<u>20.0</u>	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>NPORD MW-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: 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
 Site Address: 6701 Old Earhart Road
 City: Oakland, CA

Job Number: 25-948218.1
 Event Date: 9/2/11 (inclusive)
 Sampler: JH

Well ID: NPORD MW-4
 Well Diameter: 2 1/4 in.
 Total Depth: 18.83 ft.
 Depth to Water: 6.11 ft.

Date Monitored: 9/2/11

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 12.72 xVF .17 = 2.16 Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 8.65 x3 case volume = Estimated Purge Volume: 6.48 gal.

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): 0905
 Sample Time/Date: 0950 / 9/2/11
 Approx. Flow Rate: _____ gpm.
 Did well de-water? NO If yes, Time: _____

Weather Conditions: Clear
 Water Color: cloudy Odor: GIN L.S.H
 Sediment Description: L.S.H
 Volume: _____ gal. DTW @ Sampling: 8.08

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm - μ S)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>0911</u>	<u>2</u>	<u>7.62</u>	<u>out of Range</u>	<u>19.7</u>		
<u>0918</u>	<u>4</u>	<u>7.39</u>	<u>↓</u>	<u>19.8</u>		
<u>0926</u>	<u>6.5</u>	<u>7.16</u>		<u>19.9</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>NPORD</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)
<u>MW-4</u>					

COMMENTS: Tubing in 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	TZ
9/13/11	1145	MW18				308 Grams	
9/22/11	8:00	MW18				298 Grams	TZ
9/30/11	1730	MW18				302 Grams	
10/7/11	1600	MW18				288 Grams	



Laboratory Results

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

Subject : 19 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 standard. All soil samples are reported on a total weight (wet weight) basis unless noted otherwise in the case narrative. 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,



Joel Kiff

Subject : 19 Water Samples
Project Name : Rolls-Royce Engine Test Facility
Project Number : 25-948218.1

Case Narrative

Sample MW-13 was analyzed by EPA Method 8260B using bottles that contained headspace bubbles greater than 1/4 inch in diameter.

Samples MW-13 and MW-16 were analyzed outside of hold time for Method EPA 8260B. The hydrochloric acid (HCl) preservation was insufficient to maintain a pH of 2.0 or less required to extend sample hold time.

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

Project Number : **25-948218.1**

Sample : **MW-1**

Matrix : Water

Lab Number : 78685-01

Sample Date :09/02/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 02:28
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 02:28
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 02:28
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 02:28
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 02:28
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/13/11 02:28
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 02:28
1,2-Dichloroethane-d4 (Surr)	104		% Recovery	EPA 8260B	09/13/11 02:28
Toluene - d8 (Surr)	99.2		% Recovery	EPA 8260B	09/13/11 02:28
4-Bromofluorobenzene (Surr)	95.4		% Recovery	EPA 8260B	09/13/11 02:28
TPH as Jet Fuel	< 50	50	ug/L	M EPA 8015	09/13/11 13:47
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	09/13/11 13:47
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	09/12/11 20:01
Octacosane (Diesel Surrogate)	107		% Recovery	M EPA 8015	09/13/11 13:47
Octacosane (Silica Gel Surr)	94.5		% Recovery	M EPA 8015	09/12/11 20:01

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

Project Number : **25-948218.1**

Sample : **MW-2**

Matrix : Water

Lab Number : 78685-02

Sample Date :09/02/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 03:02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 03:02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 03:02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 03:02
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 03:02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/13/11 03:02
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 03:02
1,2-Dichloroethane-d4 (Surr)	103		% Recovery	EPA 8260B	09/13/11 03:02
Toluene - d8 (Surr)	99.0		% Recovery	EPA 8260B	09/13/11 03:02
4-Bromofluorobenzene (Surr)	94.1		% Recovery	EPA 8260B	09/13/11 03:02
TPH as Jet Fuel	< 50	50	ug/L	M EPA 8015	09/13/11 14:22
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	09/13/11 14:22
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	09/12/11 20:30
Octacosane (Diesel Surrogate)	111		% Recovery	M EPA 8015	09/13/11 14:22
Octacosane (Silica Gel Surr)	101		% Recovery	M EPA 8015	09/12/11 20:30

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

Project Number : **25-948218.1**

Sample : **MW-3**

Matrix : Water

Lab Number : 78685-03

Sample Date :09/02/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 15:01
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 15:01
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 15:01
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 15:01
Methyl-t-butyl ether (MTBE)	0.68	0.50	ug/L	EPA 8260B	09/12/11 15:01
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/12/11 15:01
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 15:01
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	09/12/11 15:01
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	09/12/11 15:01
4-Bromofluorobenzene (Surr)	98.8		% Recovery	EPA 8260B	09/12/11 15:01
TPH as Jet Fuel (Note: Higher boiling hydrocarbons present, atypical for Jet Fuel.)	590	50	ug/L	M EPA 8015	09/13/11 14:57
TPH as Motor Oil	340	100	ug/L	M EPA 8015	09/13/11 14:57
TPH as Diesel (Silica Gel)	70	50	ug/L	M EPA 8015	09/12/11 20:59
Octacosane (Diesel Surrogate)	119		% Recovery	M EPA 8015	09/13/11 14:57
Octacosane (Silica Gel Surr)	122		% Recovery	M EPA 8015	09/12/11 20:59

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

Project Number : **25-948218.1**

Sample : **MW-4**

Matrix : Water

Lab Number : 78685-04

Sample Date :09/02/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 15:33
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 15:33
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 15:33
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 15:33
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 15:33
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/12/11 15:33
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 15:33
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	09/12/11 15:33
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	09/12/11 15:33
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	09/12/11 15:33
TPH as Jet Fuel	490	50	ug/L	M EPA 8015	09/13/11 15:32
(Note: Higher boiling hydrocarbons present, atypical for Jet Fuel.)					
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	09/13/11 15:32
TPH as Diesel (Silica Gel)	60	50	ug/L	M EPA 8015	09/12/11 21:29
Octacosane (Diesel Surrogate)	107		% Recovery	M EPA 8015	09/13/11 15:32
Octacosane (Silica Gel Surr)	109		% Recovery	M EPA 8015	09/12/11 21:29

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

Project Number : **25-948218.1**

Sample : **MW-5**

Matrix : Water

Lab Number : 78685-05

Sample Date :09/02/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 16:04
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 16:04
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 16:04
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 16:04
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 16:04
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/12/11 16:04
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 16:04
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	09/12/11 16:04
Toluene - d8 (Surr)	99.4		% Recovery	EPA 8260B	09/12/11 16:04
4-Bromofluorobenzene (Surr)	98.0		% Recovery	EPA 8260B	09/12/11 16:04
TPH as Jet Fuel	450	50	ug/L	M EPA 8015	09/13/11 16:07
(Note: Higher boiling hydrocarbons present, atypical for Jet Fuel.)					
TPH as Motor Oil	760	100	ug/L	M EPA 8015	09/13/11 16:07
TPH as Diesel (Silica Gel)	310	50	ug/L	M EPA 8015	09/12/11 21:58
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
Octacosane (Diesel Surrogate)	108		% Recovery	M EPA 8015	09/13/11 16:07
Octacosane (Silica Gel Surr)	109		% Recovery	M EPA 8015	09/12/11 21:58

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

Project Number : **25-948218.1**

Sample : **MW-6**

Matrix : Water

Lab Number : 78685-06

Sample Date :09/02/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 16:35
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 16:35
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 16:35
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 16:35
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 16:35
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/12/11 16:35
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 16:35
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	09/12/11 16:35
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	09/12/11 16:35
4-Bromofluorobenzene (Surr)	96.9		% Recovery	EPA 8260B	09/12/11 16:35
TPH as Jet Fuel	260	50	ug/L	M EPA 8015	09/13/11 16:42
(Note: Higher boiling hydrocarbons present, atypical for Jet Fuel.)					
TPH as Motor Oil	970	100	ug/L	M EPA 8015	09/13/11 16:42
TPH as Diesel (Silica Gel)	310	50	ug/L	M EPA 8015	09/12/11 22:27
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
Octacosane (Diesel Surrogate)	105		% Recovery	M EPA 8015	09/13/11 16:42
Octacosane (Silica Gel Surr)	104		% Recovery	M EPA 8015	09/12/11 22:27

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

Project Number : **25-948218.1**

Sample : **MW-7**

Matrix : Water

Lab Number : 78685-07

Sample Date :09/02/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 14:30
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 14:30
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 14:30
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 14:30
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 14:30
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/12/11 14:30
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 14:30
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	09/12/11 14:30
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	09/12/11 14:30
4-Bromofluorobenzene (Surr)	98.2		% Recovery	EPA 8260B	09/12/11 14:30
TPH as Diesel (Silica Gel)	2100	50	ug/L	M EPA 8015	09/12/11 22:56
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Jet Fuel	1200	50	ug/L	M EPA 8015	09/13/11 17:17
(Note: Higher boiling hydrocarbons present, atypical for Jet Fuel.)					
TPH as Motor Oil	6200	100	ug/L	M EPA 8015	09/13/11 17:17
Octacosane (Silica Gel Surr)	114		% Recovery	M EPA 8015	09/12/11 22:56
Octacosane (Diesel Surrogate)	115		% Recovery	M EPA 8015	09/13/11 17:17

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

Project Number : **25-948218.1**

Sample : **MW-8**

Matrix : Water

Lab Number : 78685-08

Sample Date :09/02/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 13:59
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 13:59
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 13:59
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 13:59
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 13:59
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/12/11 13:59
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 13:59
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	09/12/11 13:59
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	09/12/11 13:59
4-Bromofluorobenzene (Surr)	95.2		% Recovery	EPA 8260B	09/12/11 13:59
TPH as Diesel (Silica Gel)	63	50	ug/L	M EPA 8015	09/12/11 23:26
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Jet Fuel	240	50	ug/L	M EPA 8015	09/13/11 17:53
(Note: Higher boiling hydrocarbons present, atypical for Jet Fuel.)					
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	09/13/11 17:53
Octacosane (Silica Gel Surr)	110		% Recovery	M EPA 8015	09/12/11 23:26
Octacosane (Diesel Surrogate)	102		% Recovery	M EPA 8015	09/13/11 17:53

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

Project Number : **25-948218.1**

Sample : **MW-9**

Matrix : Water

Lab Number : 78685-09

Sample Date :09/02/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 14:05
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 14:05
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 14:05
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 14:05
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 14:05
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/12/11 14:05
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 14:05
1,2-Dichloroethane-d4 (Surr)	99.6		% Recovery	EPA 8260B	09/12/11 14:05
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	09/12/11 14:05
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	09/12/11 14:05
TPH as Diesel (Silica Gel)	250	50	ug/L	M EPA 8015	09/12/11 23:55
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Jet Fuel	700	50	ug/L	M EPA 8015	09/13/11 18:27
(Note: Higher boiling hydrocarbons present, atypical for Jet Fuel.)					
TPH as Motor Oil	500	100	ug/L	M EPA 8015	09/13/11 18:27
Octacosane (Silica Gel Surr)	109		% Recovery	M EPA 8015	09/12/11 23:55
Octacosane (Diesel Surrogate)	117		% Recovery	M EPA 8015	09/13/11 18:27

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

Project Number : **25-948218.1**

Sample : **MW-10**

Matrix : Water

Lab Number : 78685-10

Sample Date :09/02/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 14:41
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 14:41
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 14:41
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 14:41
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 14:41
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/12/11 14:41
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 14:41
1,2-Dichloroethane-d4 (Surr)	99.8		% Recovery	EPA 8260B	09/12/11 14:41
Toluene - d8 (Surr)	99.8		% Recovery	EPA 8260B	09/12/11 14:41
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	09/12/11 14:41
TPH as Diesel (Silica Gel)	93	50	ug/L	M EPA 8015	09/13/11 00:24
TPH as Jet Fuel	890	50	ug/L	M EPA 8015	09/13/11 22:43
(Note: Higher boiling hydrocarbons present, atypical for Jet Fuel.)					
TPH as Motor Oil	260	100	ug/L	M EPA 8015	09/13/11 22:43
(Note: Discrete peaks in Motor Oil range, atypical for Motor Oil.)					
Octacosane (Silica Gel Surr)	105		% Recovery	M EPA 8015	09/13/11 00:24
Octacosane (Diesel Surrogate)	119		% Recovery	M EPA 8015	09/13/11 22:43

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

Project Number : **25-948218.1**

Sample : **MW-11**

Matrix : Water

Lab Number : 78685-11

Sample Date :09/02/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 15:16
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 15:16
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 15:16
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 15:16
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 15:16
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/12/11 15:16
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 15:16
1,2-Dichloroethane-d4 (Surr)	98.2		% Recovery	EPA 8260B	09/12/11 15:16
Toluene - d8 (Surr)	99.6		% Recovery	EPA 8260B	09/12/11 15:16
4-Bromofluorobenzene (Surr)	99.3		% Recovery	EPA 8260B	09/12/11 15:16
TPH as Diesel (Silica Gel)	470	50	ug/L	M EPA 8015	09/13/11 00:54
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Jet Fuel	720	50	ug/L	M EPA 8015	09/13/11 23:18
(Note: Higher boiling hydrocarbons present, atypical for Jet Fuel.)					
TPH as Motor Oil	990	100	ug/L	M EPA 8015	09/13/11 23:18
Octacosane (Silica Gel Surr)	103		% Recovery	M EPA 8015	09/13/11 00:54
Octacosane (Diesel Surrogate)	112		% Recovery	M EPA 8015	09/13/11 23:18

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

Project Number : **25-948218.1**

Sample : **MW-12**

Matrix : Water

Lab Number : 78685-12

Sample Date :09/02/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 15:51
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 15:51
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 15:51
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 15:51
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 15:51
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/12/11 15:51
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 15:51
1,2-Dichloroethane-d4 (Surr)	98.5		% Recovery	EPA 8260B	09/12/11 15:51
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	09/12/11 15:51
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	09/12/11 15:51
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	09/13/11 01:23
TPH as Jet Fuel	< 50	50	ug/L	M EPA 8015	09/13/11 23:53
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	09/13/11 23:53
Octacosane (Silica Gel Surr)	104		% Recovery	M EPA 8015	09/13/11 01:23
Octacosane (Diesel Surrogate)	113		% Recovery	M EPA 8015	09/13/11 23:53

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

Project Number : **25-948218.1**

Sample : **MW-13**

Matrix : Water

Lab Number : 78685-13

Sample Date :09/02/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 16:26
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 16:26
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 16:26
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 16:26
Methyl-t-butyl ether (MTBE)	1.4	0.50	ug/L	EPA 8260B	09/12/11 16:26
TPH as Gasoline (Note: Primarily compounds not found in typical Gasoline)	380	50	ug/L	EPA 8260B	09/12/11 16:26
Naphthalene	1.4	0.50	ug/L	EPA 8260B	09/12/11 16:26
1,2-Dichloroethane-d4 (Surr)	97.8		% Recovery	EPA 8260B	09/12/11 16:26
Toluene - d8 (Surr)	99.6		% Recovery	EPA 8260B	09/12/11 16:26
4-Bromofluorobenzene (Surr)	99.7		% Recovery	EPA 8260B	09/12/11 16:26
TPH as Diesel (Silica Gel)	500	50	ug/L	M EPA 8015	09/13/11 01:52
TPH as Jet Fuel (Note: Higher boiling hydrocarbons present, atypical for Jet Fuel.)	1400	50	ug/L	M EPA 8015	09/14/11 00:29
TPH as Motor Oil	260	100	ug/L	M EPA 8015	09/14/11 00:29
Octacosane (Silica Gel Surr)	98.8		% Recovery	M EPA 8015	09/13/11 01:52
Octacosane (Diesel Surrogate)	101		% Recovery	M EPA 8015	09/14/11 00:29

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

Project Number : **25-948218.1**

Sample : **MW-14**

Matrix : Water

Lab Number : 78685-14

Sample Date :09/02/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 17:01
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 17:01
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 17:01
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 17:01
Methyl-t-butyl ether (MTBE)	0.98	0.50	ug/L	EPA 8260B	09/12/11 17:01
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/12/11 17:01
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 17:01
1,2-Dichloroethane-d4 (Surr)	98.9		% Recovery	EPA 8260B	09/12/11 17:01
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	09/12/11 17:01
4-Bromofluorobenzene (Surr)	99.9		% Recovery	EPA 8260B	09/12/11 17:01
TPH as Diesel (Silica Gel)	140	50	ug/L	M EPA 8015	09/13/11 01:15
(Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)					
TPH as Jet Fuel	900	50	ug/L	M EPA 8015	09/14/11 01:04
(Note: Higher boiling hydrocarbons present, atypical for Jet Fuel.)					
TPH as Motor Oil	550	100	ug/L	M EPA 8015	09/14/11 01:04
Octacosane (Silica Gel Surr)	110		% Recovery	M EPA 8015	09/13/11 01:15
Octacosane (Diesel Surrogate)	113		% Recovery	M EPA 8015	09/14/11 01:04

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

Project Number : **25-948218.1**

Sample : **MW-15**

Matrix : Water

Lab Number : 78685-15

Sample Date :09/02/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 21:14
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 21:14
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 21:14
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 21:14
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 21:14
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/12/11 21:14
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 21:14
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	09/12/11 21:14
Toluene - d8 (Surr)	98.6		% Recovery	EPA 8260B	09/12/11 21:14
4-Bromofluorobenzene (Surr)	94.1		% Recovery	EPA 8260B	09/12/11 21:14
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	09/13/11 01:50
TPH as Jet Fuel	< 50	50	ug/L	M EPA 8015	09/14/11 02:14
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	09/14/11 02:14
Octacosane (Silica Gel Surr)	113		% Recovery	M EPA 8015	09/13/11 01:50
Octacosane (Diesel Surrogate)	106		% Recovery	M EPA 8015	09/14/11 02:14

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

Project Number : **25-948218.1**

Sample : **MW-17**

Matrix : Water

Lab Number : 78685-16

Sample Date :09/02/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 03:37
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 03:37
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 03:37
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 03:37
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 03:37
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/13/11 03:37
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 03:37
1,2-Dichloroethane-d4 (Surr)	103		% Recovery	EPA 8260B	09/13/11 03:37
Toluene - d8 (Surr)	98.9		% Recovery	EPA 8260B	09/13/11 03:37
4-Bromofluorobenzene (Surr)	94.0		% Recovery	EPA 8260B	09/13/11 03:37
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	09/15/11 13:10
TPH as Jet Fuel	< 50	50	ug/L	M EPA 8015	09/14/11 09:33
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	09/14/11 09:33
Octacosane (Silica Gel Surr)	98.5		% Recovery	M EPA 8015	09/15/11 13:10
Octacosane (Diesel Surrogate)	96.2		% Recovery	M EPA 8015	09/14/11 09:33

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

Project Number : **25-948218.1**

Sample : **NPORDMW-3**

Matrix : Water

Lab Number : 78685-17

Sample Date :09/02/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 00:43
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 00:43
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 00:43
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 00:43
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 00:43
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/13/11 00:43
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 00:43
1,2-Dichloroethane-d4 (Surr)	103		% Recovery	EPA 8260B	09/13/11 00:43
Toluene - d8 (Surr)	99.0		% Recovery	EPA 8260B	09/13/11 00:43
4-Bromofluorobenzene (Surr)	94.0		% Recovery	EPA 8260B	09/13/11 00:43
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	09/13/11 14:17
TPH as Jet Fuel	< 50	50	ug/L	M EPA 8015	09/14/11 03:24
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	09/14/11 03:24
Octacosane (Silica Gel Surr)	107		% Recovery	M EPA 8015	09/13/11 14:17
Octacosane (Diesel Surrogate)	106		% Recovery	M EPA 8015	09/14/11 03:24

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

Project Number : **25-948218.1**

Sample : **NPORDMW-4**

Matrix : Water

Lab Number : 78685-18

Sample Date :09/02/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 00:08
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 00:08
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 00:08
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 00:08
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 00:08
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/13/11 00:08
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	09/13/11 00:08
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	09/13/11 00:08
Toluene - d8 (Surr)	99.5		% Recovery	EPA 8260B	09/13/11 00:08
4-Bromofluorobenzene (Surr)	93.7		% Recovery	EPA 8260B	09/13/11 00:08
TPH as Diesel (Silica Gel)	95	50	ug/L	M EPA 8015	09/13/11 13:48
TPH as Jet Fuel	320	50	ug/L	M EPA 8015	09/14/11 03:59
(Note: Higher boiling hydrocarbons present, atypical for Jet Fuel.)					
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	09/14/11 03:59
Octacosane (Silica Gel Surr)	112		% Recovery	M EPA 8015	09/13/11 13:48
Octacosane (Diesel Surrogate)	108		% Recovery	M EPA 8015	09/14/11 03:59

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

Project Number : **25-948218.1**

Sample : **QA**

Matrix : Water

Lab Number : 78685-19

Sample Date :09/02/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 23:33
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 23:33
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 23:33
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 23:33
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 23:33
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/12/11 23:33
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	09/12/11 23:33
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	09/12/11 23:33
Toluene - d8 (Surr)	98.5		% Recovery	EPA 8260B	09/12/11 23:33
4-Bromofluorobenzene (Surr)	95.0		% Recovery	EPA 8260B	09/12/11 23:33

QC Report : Method Blank DataProject Name : **Rolls-Royce Engine Test Facility**Project Number : **25-948218.1**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	09/12/2011
TPH as Jet Fuel	< 50	50	ug/L	M EPA 8015	09/13/2011
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	09/13/2011
Octacosane (Diesel Surrogate)	112		%	M EPA 8015	09/13/2011
Octacosane (Silica Gel Surr)	113		%	M EPA 8015	09/12/2011
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	09/13/2011
TPH as Jet Fuel	< 50	50	ug/L	M EPA 8015	09/13/2011
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	09/13/2011
Octacosane (Diesel Surrogate)	103		%	M EPA 8015	09/13/2011
Octacosane (Silica Gel Surr)	108		%	M EPA 8015	09/13/2011
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/2011
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/2011
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/12/2011
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/12/2011
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/12/2011
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/12/2011
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	09/12/2011
1,2-Dichloroethane-d4 (Surr)	103		%	EPA 8260B	09/12/2011
4-Bromofluorobenzene (Surr)	96.2		%	EPA 8260B	09/12/2011
Toluene - d8 (Surr)	99.6		%	EPA 8260B	09/12/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/2011
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/2011
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/12/2011
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/12/2011
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/12/2011
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/12/2011
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	09/12/2011
1,2-Dichloroethane-d4 (Surr)	99.2		%	EPA 8260B	09/12/2011
4-Bromofluorobenzene (Surr)	96.3		%	EPA 8260B	09/12/2011
Toluene - d8 (Surr)	100		%	EPA 8260B	09/12/2011
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/2011
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/12/2011
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/12/2011
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/12/2011
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/12/2011
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/12/2011
Naphthalene	< 0.50	0.50	ug/L	EPA 8260B	09/12/2011
1,2-Dichloroethane-d4 (Surr)	99.4		%	EPA 8260B	09/12/2011
4-Bromofluorobenzene (Surr)	100		%	EPA 8260B	09/12/2011
Toluene - d8 (Surr)	100		%	EPA 8260B	09/12/2011

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	914	934	ug/L	M EPA 8015	9/12/11	91.4	93.4	2.12	70-130	25
TPH as Diesel	BLANK	<50	1000	1000	967	970	ug/L	M EPA 8015	9/13/11	96.7	97.0	0.212	70-130	25
TPH-D (Si Gel)	BLANK	<50	1000	1000	866	880	ug/L	M EPA 8015	9/13/11	86.6	88.0	1.68	70-130	25
TPH as Diesel	BLANK	<50	1000	1000	881	957	ug/L	M EPA 8015	9/13/11	88.1	95.7	8.28	70-130	25
Benzene	78685-15	<0.50	40.0	40.0	38.6	38.5	ug/L	EPA 8260B	9/12/11	96.4	96.2	0.215	80-120	25
Ethylbenzene	78685-15	<0.50	40.0	40.0	39.7	38.9	ug/L	EPA 8260B	9/12/11	99.2	97.2	1.96	80-120	25
Methyl-t-butyl ether	78685-15	<0.50	40.2	40.2	42.9	43.7	ug/L	EPA 8260B	9/12/11	107	109	1.93	69.7-121	25
Naphthalene	78685-15	<0.50	40.0	40.0	37.0	38.3	ug/L	EPA 8260B	9/12/11	92.5	95.8	3.51	70.0-130	25
P + M Xylene	78685-15	<0.50	40.0	40.0	38.6	38.4	ug/L	EPA 8260B	9/12/11	96.6	96.0	0.641	76.8-120	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
Toluene	78685-15	<0.50	40.0	40.0	38.6	38.3	ug/L	EPA 8260B	9/12/11	96.4	95.8	0.724	80-120	25
Benzene	78723-04	<0.50	40.0	40.0	40.8	39.9	ug/L	EPA 8260B	9/12/11	102	99.8	2.02	80-120	25
Ethylbenzene	78723-04	<0.50	40.0	40.0	41.6	40.4	ug/L	EPA 8260B	9/12/11	104	101	2.88	80-120	25
Methyl-t-butyl ether	78723-04	<0.50	40.2	40.2	43.9	43.9	ug/L	EPA 8260B	9/12/11	109	109	0.153	69.7-121	25
Naphthalene	78723-04	<0.50	40.0	40.0	41.8	41.9	ug/L	EPA 8260B	9/12/11	104	105	0.236	70.0-130	25
P + M Xylene	78723-04	<0.50	40.0	40.0	41.8	41.0	ug/L	EPA 8260B	9/12/11	104	102	1.86	76.8-120	25
Toluene	78723-04	<0.50	40.0	40.0	41.5	41.1	ug/L	EPA 8260B	9/12/11	104	103	0.954	80-120	25
Benzene	78723-03	<0.50	40.0	40.0	41.5	40.2	ug/L	EPA 8260B	9/12/11	104	100	3.30	80-120	25
Ethylbenzene	78723-03	<0.50	40.0	40.0	42.2	40.5	ug/L	EPA 8260B	9/12/11	105	101	3.98	80-120	25

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
Methyl-t-butyl ether	78723-03	<0.50	40.2	40.2	39.3	38.1	ug/L	EPA 8260B	9/12/11	97.8	94.9	3.07	69.7-121	25
Naphthalene	78723-03	<0.50	40.0	40.0	43.1	41.6	ug/L	EPA 8260B	9/12/11	108	104	3.55	70.0-130	25
P + M Xylene	78723-03	<0.50	40.0	40.0	42.5	41.0	ug/L	EPA 8260B	9/12/11	106	102	3.52	76.8-120	25
Toluene	78723-03	<0.50	40.0	40.0	41.9	40.5	ug/L	EPA 8260B	9/12/11	105	101	3.56	80-120	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	40.1	ug/L	EPA 8260B	9/12/11	101	80-120
Ethylbenzene	40.1	ug/L	EPA 8260B	9/12/11	103	80-120
Methyl-t-butyl ether	40.3	ug/L	EPA 8260B	9/12/11	113	69.7-121
Naphthalene	40.1	ug/L	EPA 8260B	9/12/11	98.2	70.0-130
P + M Xylene	40.1	ug/L	EPA 8260B	9/12/11	102	76.8-120
TPH as Gasoline	500	ug/L	EPA 8260B	9/12/11	100	70.0-130
Toluene	40.1	ug/L	EPA 8260B	9/12/11	101	80-120
Benzene	39.8	ug/L	EPA 8260B	9/12/11	100	80-120
Ethylbenzene	39.8	ug/L	EPA 8260B	9/12/11	102	80-120
Methyl-t-butyl ether	40.0	ug/L	EPA 8260B	9/12/11	106	69.7-121
Naphthalene	39.8	ug/L	EPA 8260B	9/12/11	103	70.0-130
P + M Xylene	39.8	ug/L	EPA 8260B	9/12/11	102	76.8-120
TPH as Gasoline	500	ug/L	EPA 8260B	9/12/11	110	70.0-130
Toluene	39.8	ug/L	EPA 8260B	9/12/11	102	80-120
Benzene	39.8	ug/L	EPA 8260B	9/12/11	102	80-120
Ethylbenzene	39.8	ug/L	EPA 8260B	9/12/11	104	80-120
Methyl-t-butyl ether	40.0	ug/L	EPA 8260B	9/12/11	98.0	69.7-121
Naphthalene	39.8	ug/L	EPA 8260B	9/12/11	106	70.0-130
P + M Xylene	39.8	ug/L	EPA 8260B	9/12/11	105	76.8-120
TPH as Gasoline	500	ug/L	EPA 8260B	9/12/11	104	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	39.8	ug/L	EPA 8260B	9/12/11	104	80-120

Global ID #: T06019775776

Yes
 No

78685

Chain-of-Custody-Record

Direct Bill To:
Douglas Lee
Gettler-Ryan Inc.
6747 Sierra Court
Suite J
Dublin, CA 94568

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-15	7	W	9/21 0925	X	X	X	X									EDF NEEDED 20F-2
MW-17			1005													
NPORDPW-3			1150													
NPORDPW-4			0950													
QA	2	W	09-02-11				X									

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	Iced (Y/N)
	Gettler-Ryan	9/3/11 1000	GETTLER-RYAN FRIDGE	G-R	09-06-11 0700	
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	Iced (Y/N)
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time	Iced (Y/N)
			Kiff Analytical		1025 0700	

Turn Around Time (Circle Choice)

24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted

SAMPLE RECEIPT CHECKLIST

RECEIVER
WJ
Initials

SRG#: 78685 Date: 090811
Project ID: Rolls-Royce Engine Test Facility
Method of Receipt: Courier Over-the-counter Shipper

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: Yes No (includes water)
Temperature °C 1.2 Therm. ID# 12-5 Initial WJ Date/Time 090811 1350 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 128
Matrix _____ Container type _____ # of containers received _____
Matrix _____ Container type _____ # of containers received _____
Date and Time Sample Put into Temp Storage Date: 090811 Time: 1359

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: Bubbles in -02 (VOA 7), -05 (5,6,7), -06 (7), -13 (all),
-16 (7). TJS 090811 1648