# GETTLER-RYAN INC.



November 11, 2009

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

**Subject:** **3rd Quarter 2009 Groundwater Monitoring and Sampling Report**
**Rolls-Royce Engine Service Test Facility,**
**6701 Old Earhart Road, Oakland, California**
**Alameda County Site #RO0002606**

Mr. Plunkett,

On behalf of Rolls-Royce Engine Services-Oakland Inc. (RR), Gettler-Ryan Inc. (GR) has prepared this third quarter 2009 groundwater monitoring and sampling report for the above-referenced property. 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 24, 2009, GR personnel conducted quarterly 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, Quarterly Groundwater Sampling (attached).

On September 24, 2009, GR collected depth to groundwater measurements in eighteen 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 0.46 ft of SPH were observed in well MW-18.

Approximately 0.07 gallon (9 ounces) of SPH were bailed from well MW-18 and were 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. Field data sheets for this event are attached.

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 0.46 feet of SPH. Groundwater samples were submitted under chain-of-custody protocol to Kiff Analytical (ELAP #2236) 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 RR.

**Results**

Groundwater Gradient

On September 24, 2009, the groundwater flow direction varied with hydraulic gradients ranging between 0.004 ft/ft to 0.03 ft/ft. A Potentiometric Map is presented as Figure 3.

Analytical Results

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. Groundwater chemical analytical results for this event are presented in Table 1.

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, 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 eleven wells at concentrations ranging from 88 ppb in well MW-14 to 1,400 ppb in wells MW-5 and MW-11. Concentrations of TPHmo were detected in eleven wells at levels ranging from 130 ppb in well MW-13 to 3,800 ppb in well MW-11. TPHjf was detected in twelve wells at concentrations ranging from 340 ppb in well MW-8 to 5,400 ppb in well MW-13.

BTEX constituents were reported as below the laboratory method detection limits in all of the wells, except for benzene detected in well MW-13 at a concentration of 1.5 ppb and xylenes detected in well MW-10 at a concentration of 0.69 ppb..

MtBE was detected in wells MW-3, MW-13, MW-14 at concentrations of 0.70 ppb, 2.5 ppb, and 0.83 ppb, respectively. Napthalene was detected in well MW-13 at concentrations of 6.8 ppb. TPHg, TPHd, TPHmo and TPHjf concentrations are presented on Figure 4.

**Conclusions and Recommendations**

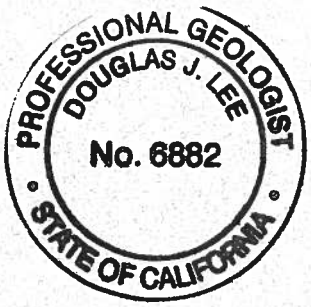
Based on the results of this groundwater monitoring and sampling event, GR concludes and recommends the following:

- Non-detectable concentrations of dissolved petroleum hydrocarbons were present in wells MW-1, MW-2, MW-12, MW-15 and NPORD MW-3 located along the northeast edge of the site;
- Detectable dissolved 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;
- Detectable dissolved concentrations of TPHd, TPHmo and TPHjf were present in a majority of the site wells. The highest concentrations have been detected in the vicinity of Test Cells 1, 5, 6, and 7; and
- In email correspondence dated October 20, 2009, the Alameda County Environmental Health Department approved GR's recommendation for reduction of groundwater monitoring and sampling to a semi-annual basis, with the exception of well MW-18, in which SPH will be monitored and removed on a quarterly basis. GR will implement the approved program with quarterly SPH removal in MW-18 and semi-annual monitoring and sampling of the remaining wells in the first and third quarters.

If you have any questions, please feel free to contact our Rancho Cordova office at (916) 631-1300.

Sincerely,
**Gettler-Ryan Inc.**

Geoffrey D. Risse
Staff Geologist




Douglas J. Lee
Senior Geologist, P.G. No. 6882

Attachments: Table 1, Groundwater Monitoring Results
Figure 1, Vicinity Map
Figure 2, Site Plan
Figure 3, Potentiometric Map
Figure 4, Concentration Map
GR Field Methods and Procedures
Field Data Sheets
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 Results

Rolls-Royce Engine Service Test Facility

6701 Old Earhart Road

Oakland, California

| Sample ID | Sample Date | TOC (feet) | DTW (feet) | SPH Thickness (feet) | GWE (feet) | TPHg (ppb) | TPHd[1] (ppb) | TPHmo (ppb) | TPHjf (ppb) | B (ppb) | T (ppb) | E (ppb) | X (ppb) | MtBE (ppb) | Napthalene (ppb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-1** | 10/3/07 | 7.17 | 3.04 | 0.00 | 4.13 | <50 | <50 | <100 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 3/14/08 | 7.17 | 3.02 | 0.00 | 4.15 | <50 | <50 | <100 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 6/26/08 | 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 |
| | 9/25/08 | 7.17 | 3.03 | 0.00 | 4.14 | <50 | <50 | <100 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 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 |
| | 3/26/09 | 7.17 | 3.30 | 0.00 | 3.87 | <50 | <50 | <100 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 6/24/09 | 7.17 | 2.57 | 0.00 | 4.60 | <50 | <50 | <100 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | **9/24/09** | **7.17** | **3.08** | **0.00** | **4.09** | **<50** | **<50** | **<100** | **<50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** |
| **MW-2** | 10/3/07 | 7.03 | 2.80 | 0.00 | 4.23 | <50 | <50 | <100 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 3/14/08 | 7.03 | 2.94 | 0.00 | 4.09 | <50 | <50 | <100 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 6/26/08 | 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 |
| | 9/25/08 | 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 |
| | 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 |
| | 3/26/09 | 7.03 | 3.15 | 0.00 | 3.88 | <50 | <50 | <100 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 6/24/09 | 7.03 | 2.52 | 0.00 | 4.51 | <50 | <50 | <100 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | **9/24/09** | **7.03** | **2.87** | **0.00** | **4.16** | **<50** | **<50** | **<100** | **<50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** |
| **MW-3** | 10/2/07 | 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 |

**Table 1**
Groundwater Monitoring Results
Rolls-Royce Engine Service Test Facility
6701 Old Earhart Road
Oakland, California

| Sample ID | Sample Date | TOC (feet) | DTW (feet) | SPH Thickness (feet) | GWE (feet) | TPHg (ppb) | TPHd[1] (ppb) | TPHmo (ppb) | TPHjf (ppb) | B (ppb) | T (ppb) | E (ppb) | X (ppb) | MtBE (ppb) | Napthalene (ppb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-3** | 3/14/08 | 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 |
| **(con't)** | 6/26/08 | 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 |
| | 9/25/08 | 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 |
| | 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 |
| | 3/26/09 | 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 |
| | 6/24/09 | 6.73 | 4.21 | 0.00 | 2.52 | <50 | <50 | <100 | 460 | <0.50 | <0.50 | <0.50 | <0.50 | 0.80 | <0.50 |
| | **9/24/09** | **6.73** | **4.33** | **0.00** | **2.40** | **<50** | **<50** | **<100** | **400** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **0.70** | **<0.50** |
| **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 |
| | 3/14/08 | 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 |
| | 6/26/08 | 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 |
| | 9/25/08 | 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 |
| | 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 |
| | 3/26/09 | 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 |
| | 6/24/09 | 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 |
| | **9/24/09** | **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** |
| **MW-5** | 10/2/07 | 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 |
| | 3/14/08 | 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 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-5** | 6/26/08 | 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 |
| **(con't)** | 9/25/08 | 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 |
| | 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 |
| | 3/26/09 | 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 |
| | 6/24/09 | 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 |
| | **9/24/09** | **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** |
| **MW-6** | 10/2/07 | 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 |
| | 3/14/08 | 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 |
| | 6/26/08 | 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 |
| | 9/25/08 | 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 |
| | 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 |
| | 3/26/09 | 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 |
| | 6/24/09 | 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 |
| | **9/24/09** | **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** |
| **MW-7** | 10/2/07 | 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 |
| | 3/14/08 | 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 |
| | 6/26/08 | 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 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-7** | 9/25/08 | 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 |
| **(con't)** | 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 |
| | 3/26/09 | 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 |
| | 6/24/09 | 9.23 | 5.22 | 0.00 | 4.01 | <50 | <50 | <100 | 390 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | **9/24/09** | **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** |
| **MW-8** | 9/14/07 | 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 |
| | 3/14/08 | Not able to sample well-no access agreement between Rolls-Royce and Port of Oakland | | | | | | | | | | | | | |
| | 7/3/04 | 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 |
| | 9/25/08 | 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 |
| | 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 |
| | 3/26/09 | 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 |
| | 6/24/09 | 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 |
| | **9/24/09** | **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** |
| **MW-9** | 10/3/07 | 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 |
| | 3/14/08 | 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 |
| | 6/26/08 | 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 |
| | 9/25/08 | 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 |

**Table 1**
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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-9** | 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 |
| **(con't)** | 3/26/09 | 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 |
| | 6/24/09 | 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 |
| | **9/24/09** | **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** |
| **MW-10** | 10/3/07 | 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 |
| | 3/14/08 | 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 |
| | 6/26/08 | 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 |
| | 9/25/08 | 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 |
| | 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 |
| | 3/26/09 | 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 |
| | 6/24/09 | 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 |
| | **9/24/09** | **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** |
| **MW-11** | 10/3/07 | 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 |
| | 3/14/08 | 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 |
| | 6/26/08 | 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 |
| | 9/25/08 | 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 |
| | 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 |

**Table 1**
Groundwater Monitoring Results
Rolls-Royce Engine Service Test Facility
6701 Old Earhart Road
Oakland, California

| Sample ID | Sample Date | TOC (feet) | DTW (feet) | SPH Thickness (feet) | GWE (feet) | TPHg (ppb) | TPHd[1] (ppb) | TPHmo (ppb) | TPHjf (ppb) | B (ppb) | T (ppb) | E (ppb) | X (ppb) | MtBE (ppb) | Napthalene (ppb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-11** | 3/26/09 | 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 |
| **(con't)** | 6/24/09 | 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 |
| | **9/24/09** | **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** |
| **MW-12** | 10/3/07 | 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 |
| | 3/14/08 | 7.32 | 3.35 | 0.00 | 3.97 | <50 | <50 | <100 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 6/26/08 | 7.32 | 3.60 | 0.00 | 3.72 | <50 | <50 | <100 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 9/25/08 | 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 |
| | 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 |
| | 3/26/09 | 7.32 | 3.13 | 0.00 | 4.19 | <50 | <50 | <100 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 6/24/09 | 7.32 | 3.21 | 0.00 | 4.11 | <50 | <50 | <100 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | **9/24/09** | **7.32** | **3.38** | **0.00** | **3.94** | **<50** | **<50** | **<100** | **<50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** |
| **MW-13** | 10/3/07 | 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 |
| | 3/14/08 | 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 |
| | 6/26/08 | 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 |
| | 9/25/08 | 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 |
| | 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 |
| | 3/26/09 | 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 |

**Table 1**
Groundwater Monitoring Results
Rolls-Royce Engine Service Test Facility
6701 Old Earhart Road
Oakland, California

| Sample ID | Sample Date | TOC (feet) | DTW (feet) | SPH Thickness (feet) | GWE (feet) | TPHg (ppb) | TPHd[1] (ppb) | TPHmo (ppb) | TPHjf (ppb) | B (ppb) | T (ppb) | E (ppb) | X (ppb) | MtBE (ppb) | Napthalene (ppb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-13** | 6/24/09 | 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 |
| **(con't)** | **9/24/09** | **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** |
| **MW-14** | 10/2/07 | 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 |
| | 3/14/08 | 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 |
| | 6/26/08 | 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 |
| | 9/25/08 | 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 |
| | 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 |
| | 3/26/09 | 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 |
| | 6/24/09 | 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 |
| | **9/24/09** | **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** |
| **MW-15** | 10/2/07 | 7.51 | 4.85 | 0.00 | 2.66 | <50 | 99 | <100 | 120 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 3/14/08 | 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 |
| | 6/26/08 | 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 |
| | 9/25/08 | 7.51 | 4.81 | 0.00 | 2.70 | <50 | <50 | <100 | 53 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 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 |
| | 3/26/09 | 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 |
| | 6/24/09 | 7.51 | 4.68 | 0.00 | 2.83 | <50 | <50 | <100 | 59 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |

**Table 1**
Groundwater Monitoring Results
Rolls-Royce Engine Service Test Facility
6701 Old Earhart Road
Oakland, California

| Sample ID | Sample Date | TOC (feet) | DTW (feet) | SPH Thickness (feet) | GWE (feet) | TPHg (ppb) | TPHd[1] (ppb) | TPHmo (ppb) | TPHjf (ppb) | B (ppb) | T (ppb) | E (ppb) | X (ppb) | MtBE (ppb) | Napthalene (ppb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-15 (con't)** | **9/24/09** | **7.51** | **4.75** | **0** | **2.76** | **<50** | **<50** | **<100** | **<50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** |
| **MW-17** | 9/14/07 | 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 |
| | 3/14/08 | Not able to sample well-no access agreement between Rolls-Royce and Port of Oakland | | | | | | | | | | | | | |
| | 7/3/08 | 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 |
| | 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 |
| | 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 |
| | 3/26/09 | 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 |
| | 6/24/09 | Not able to sample well-Oakland Airport security failed to provide access to well | | | | | | | | | | | | | |
| | **9/24/09** | **0.04** | **2.97** | **0.00** | **-2.93** | **<50** | **<50** | **<100** | **<50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** |
| **MW-18** | 10/2/07 | 7.05 | 4.15 | 0.55 | 3.34** | Not developed or sampled due to presence of SPH | | | | | | | | | |
| | 3/14/08 | 7.05 | 3.62 | 0.63 | 3.93** | Not sampled due to presence of SPH | | | | | | | | | |
| | 6/26/08 | 7.05 | 4.11 | 1.14 | 3.85** | Not sampled due to presence of SPH | | | | | | | | | |
| | 9/25/08 | 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 | | | | | | | | | |
| | 3/26/09 | 7.05 | 3.28 | 0.55 | 4.21** | Not sampled due to presence of SPH | | | | | | | | | |
| | 6/24/09 | 7.05 | 3.53 | 0.48 | 3.90** | Not sampled due to presence of SPH | | | | | | | | | |
| | **9/24/09** | **7.05** | **3.57** | **0.46** | **3.85**** | **Not sampled due to presence of SPH** | | | | | | | | | |

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6701 Old Earhart Road
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| Sample ID | Sample Date | TOC (feet) | DTW (feet) | SPH Thickness (feet) | GWE (feet) | TPHg (ppb) | TPHd[1] (ppb) | TPHmo (ppb) | TPHjf (ppb) | B (ppb) | T (ppb) | E (ppb) | X (ppb) | MtBE (ppb) | Napthalene (ppb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **NPORD MW-3** | 9/14/07 | 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 |
| | 3/14/08 | Not able to sample well-no access agreement between Rolls-Royce and Port of Oakland | | | | | | | | | | | | | |
| | 7/3/08 | 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 |
| | 9/25/08 | 8.11 | 4.06 | 0.00 | 4.05 | <50 | <50 | <100 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 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 |
| | 3/26/09 | 8.11 | 4.22 | 0.00 | 3.89 | <50 | <50 | <100 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 6/24/09 | 8.11 | 4.02 | 0.00 | 4.09 | <50 | <50 | <100 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | **9/24/09** | **8.11** | **4.19** | **0.00** | **3.92** | **<50** | **<50** | **<100** | **<50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** |
| **NPORD MW-4** | 9/14/07 | 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 |
| | 3/14/08 | Not able to sample well-no access agreement between Rolls-Royce and Port of Oakland | | | | | | | | | | | | | |
| | 7/3/08 | 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 |
| | 9/25/08 | 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 |
| | 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 |
| | 3/26/09 | 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 |
| | 6/24/09 | 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 |
| | **9/24/09** | **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** |
| **QA** | 9/14/07 | -- | -- | -- | -- | <50 | NA | NA | NA | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 10/2/07 | -- | -- | -- | -- | <50 | NA | NA | NA | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |

**Table 1**
Groundwater Monitoring Results
Rolls-Royce Engine Service Test Facility
6701 Old Earhart Road
Oakland, California

| Sample ID | Sample Date | TOC (feet) | DTW (feet) | SPH Thickness (feet) | GWE (feet) | TPHg (ppb) | TPHd[1] (ppb) | TPHmo (ppb) | TPHjf (ppb) | B (ppb) | T (ppb) | E (ppb) | X (ppb) | MtBE (ppb) | Napthalene (ppb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **QA** | 3/14/08 | -- | -- | -- | -- | <50 | NA | NA | NA | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| **(con't)** | 6/26/08[14] | -- | -- | -- | -- | <50 | NA | NA | NA | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 7/3/08 | -- | -- | -- | -- | <50 | <50 | <100 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 9/25/08 | -- | -- | -- | -- | <50 | <50 | <100 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 12/19/08 | -- | -- | -- | -- | <50 | <50 | <100 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 3/26/09 | -- | -- | -- | -- | <50 | <50 | <100 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 6/24/09 | -- | -- | -- | -- | <50 | NA | NA | NA | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | **9/24/09** | -- | -- | -- | -- | **<50** | **NA** | **NA** | **NA** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** |

**Explanation:**

TOC = Top of Casing Elevation
DTW = Depth to Water
GWE = Groundwater Elevation
ft = feet
SPH = Separate Phase Hydrocarbons
ppb = parts per billion (µg/L)
NA = Not Analyzed
-- = Not Applicable
QA = Trip Blank
TPHg = Total Petroleum Hydrocarbons as gasoline

**Analytical Laboratory:**

Kiff Analytical LLC (ELAP # 2236)

**Analytical Methods:**

TPHg/BTEX/MtBE/Napthalene by EPA Method 8260B
TPHd/TPHmo/TPHjf by modified EPA Method 8015

**Table 1**
Groundwater Monitoring Results
Rolls-Royce Engine Service Test Facility
6701 Old Earhart Road
Oakland, California

**Explanation: (con't)**

TPHd = Total Petroleum Hydrocarbons as diesel
TPHmo = Total Petroleum Hydrocarbons as motor oil
TPHjf = Total Petroleum Hydrocarbons as jet fuel
B = Benzene
T = Toluene
E = Ethylbenzene
X = total xylenes
MtBE = Methyl tert-Butyl Ether
** = 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.

**Notes:**

TOC elevations surveyed relative to mean sea level by Morrow Surveying (PLS #5161) on October 8, 2007
[1] 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 centrifruged 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.

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Oakland, California

**Notes: (con't)**

[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.

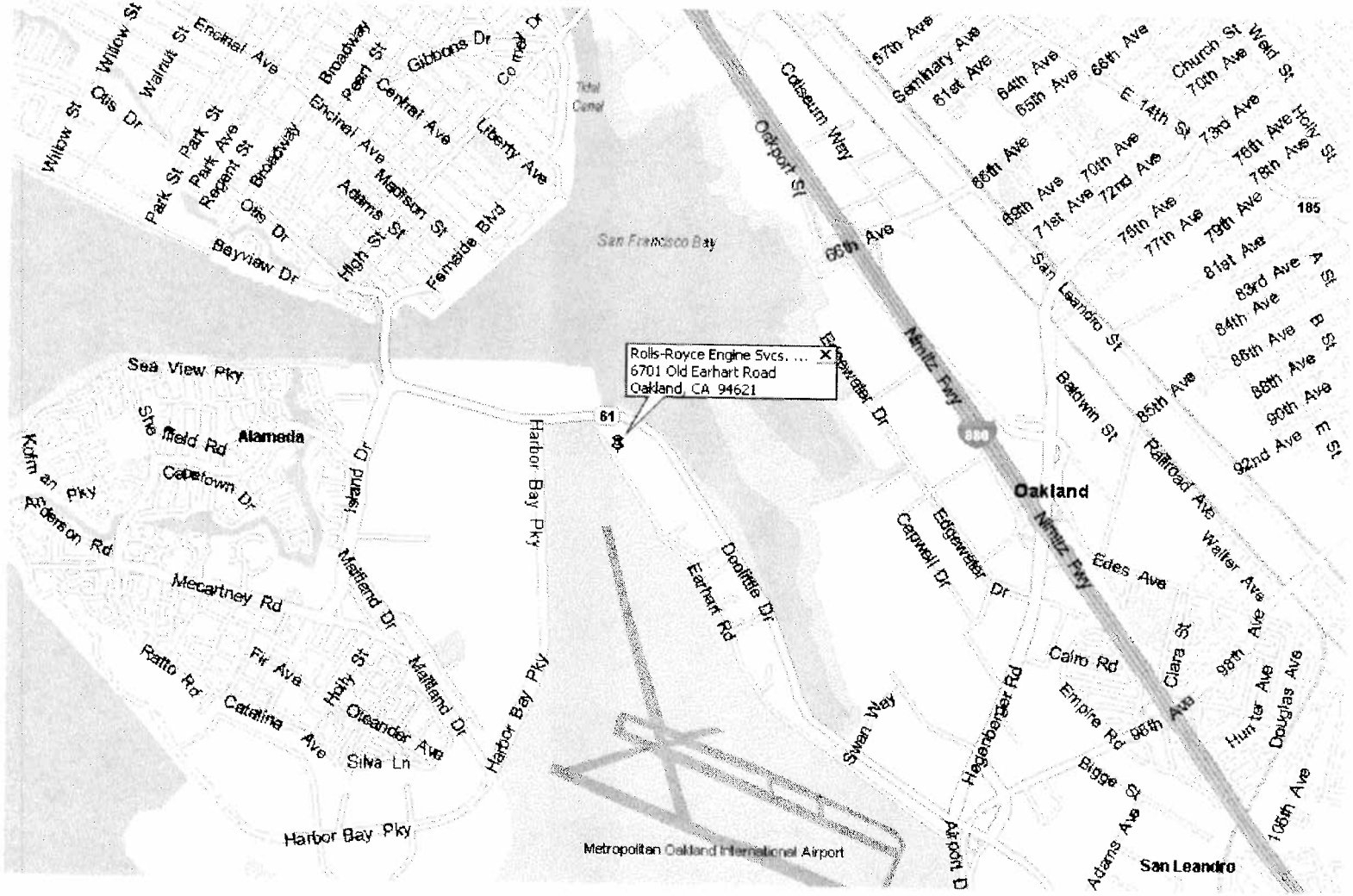
[16] Chromatographic pattern not typical for Jet Fuel.

[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

[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.




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

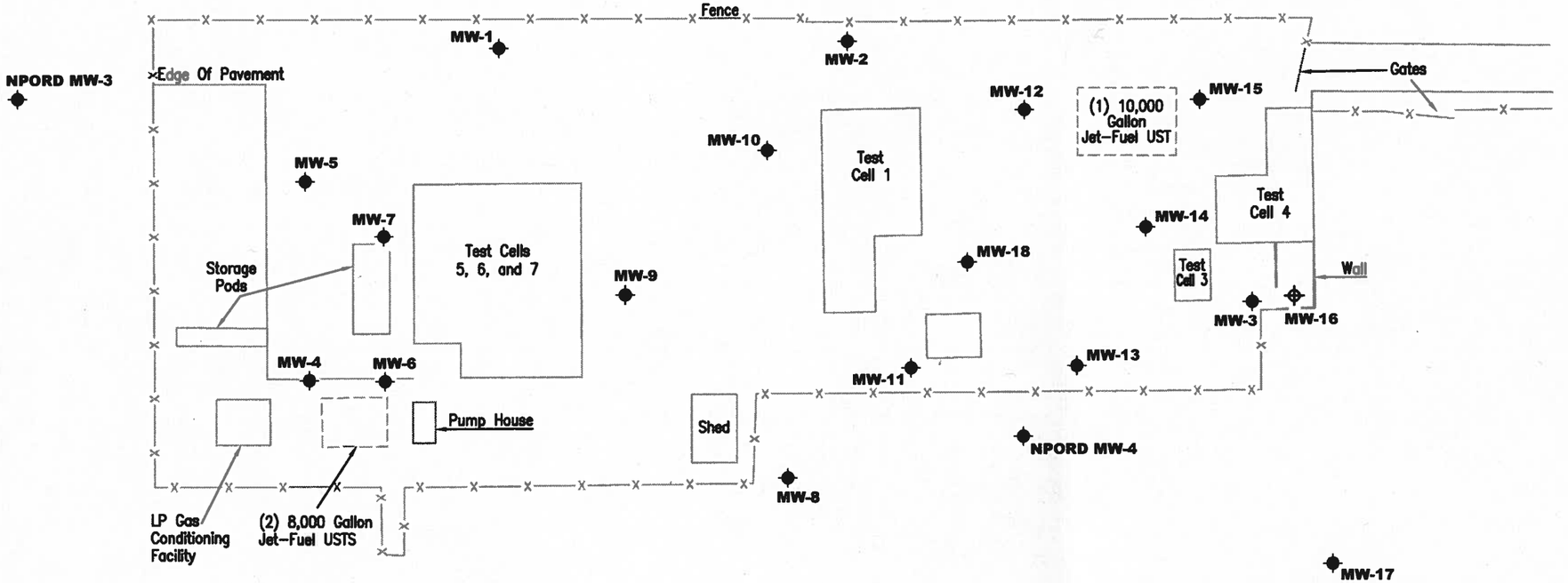
**SITE LOCATION MAP**
ROLLS-ROYCE ENGINE SERVICES TEST FACILITY
6701 OLD EARHART RD.
OAKLAND, CA

FIGURE
1

| PROJECT NUMBER | REVIEWED BY | DATE | REVISED DATE |
|---|---|---|---|
| 25-948218.7 | | 11/13/07 | |

## 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.

FIGURE 2

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

REVISED DATE

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

PROJECT NUMBER
948218.2

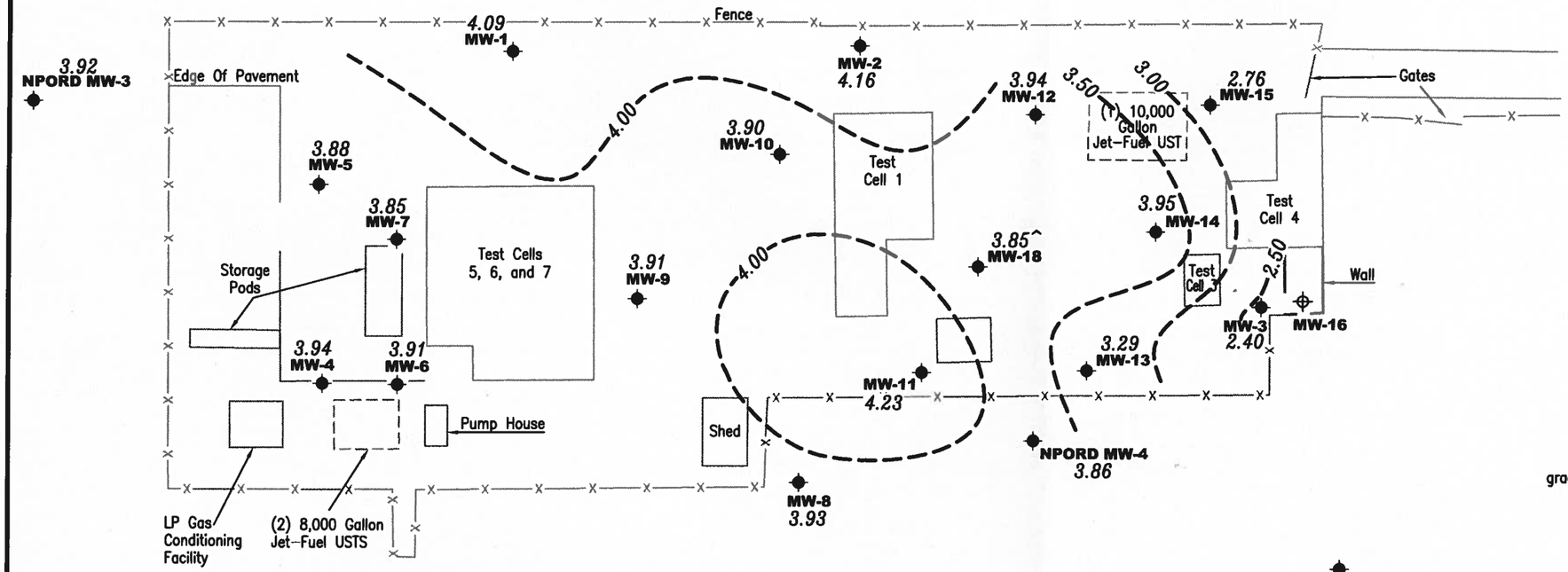
REVIEWED BY

DATE
11/07

FILE NAME: P:\Enviro\Rolls Royce\Q07-Rolls Royce.dwg | Layout Tab: Site Plan

## 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




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

FIGURE 3

**POTENTIOMETRIC MAP**
Rolls-Royce Engine Services Test Facility
6701 Oakport Road
Oakland, CA

REVISED DATE

DATE September 24, 2009

REVIEWED BY

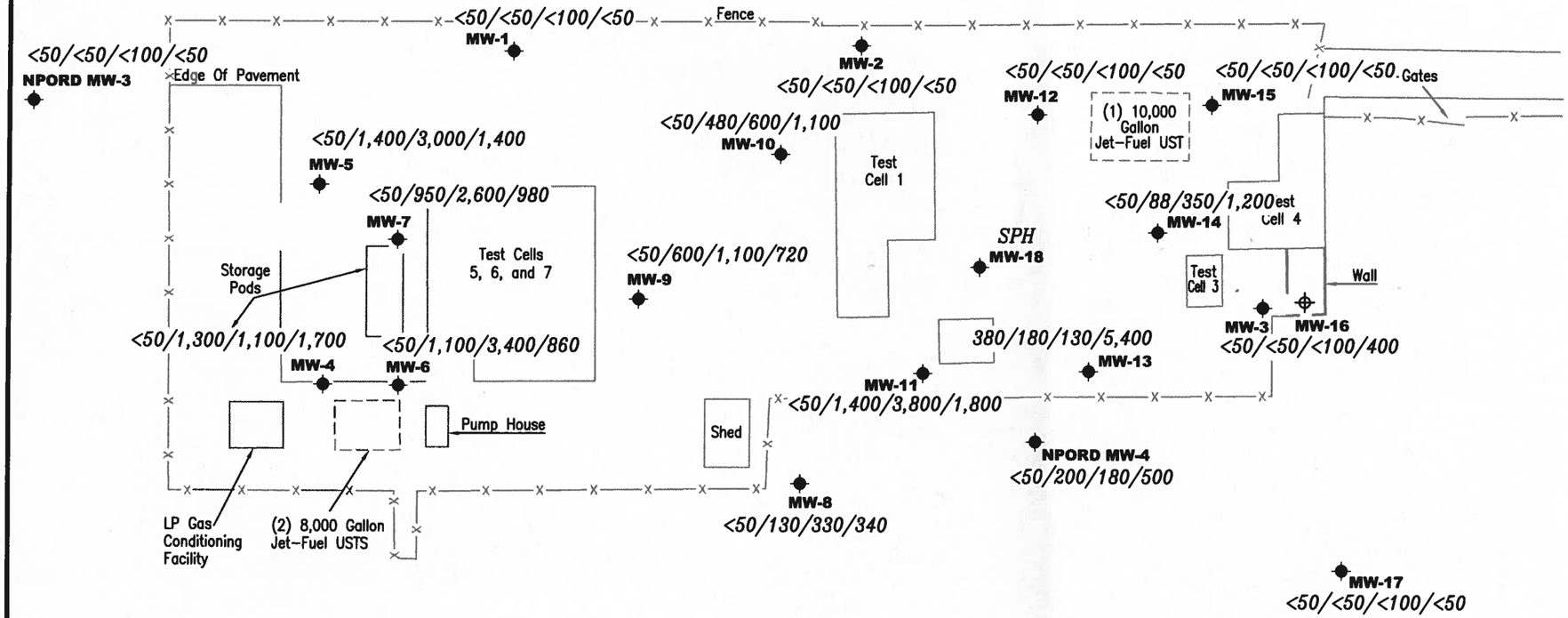
PROJECT NUMBER 948218


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


FILE NAME: P:\Enviro\Rolls Royce\Q09-Rolls Royce.dwg | Layout Tab: Pot3

## 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.

FIGURE 4

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

DATE September 24, 2009

REVISED DATE


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


PROJECT NUMBER 948218

REVIEWED BY

FILE NAME: P:\Enviro\Rolls Royce\Q09-Rolls Royce.dwg | Layout Tab: Con3

# STANDARD OPERATING PROCEDURE - QUARTERLY GROUNDWATER SAMPLING

Gettler-Ryan field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analyses by the analytical laboratory. Prior to sample collection, the type of analyses to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analyses is maintained.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using a MMC flexi-dip interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is recorded in the field notes. In addition, static water level measurements are collected with the interface probe and are also recorded in the field notes.

After water levels are collected and prior to sampling, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. Temperature, pH, and electrical conductivity are measured a minimum of three times during purging. 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 possible. 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. The samples are labeled to include job number, sample identification, collection date and time, analyses, preservative (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4 $^{o}$C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivery to the laboratory.

The chain of custody includes the job number, type of preservation, if any, analyses 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. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

# WELL CONDITION STATUS SHEET

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

Job # 25-948218.1
Event Date: 9/24/09
Sampler: JH

| WELL ID | Vault Frame Condition | Gasket/ O-Ring (M)missing | BOLTS (M) Missing (R) Replaced | Bolt Flanges B= Broken S= Stripped R=Retap | APRON Condition C=Cracked B=Broken G=Gone | Grout Seal (Deficient) inches from TOC | Casing (Condition prevents tight cap seal) | REPLACE LOCK Y / N | REPLACE CAP Y / N | WELL VAULT Manufacture/Size/ # of Bolts | Pictures Taken Yes / No |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NPORLMW-3 | OK | N/A | | | OK | | | N | N | Marcum | N |
| NPORLMW-4 | OK | N/A | | | OK | | | | | 12 | |
| MW-4 | OK | | | | | | | | | 8" Marcum | |
| MW-6 | OK | | | | | | | | | 12 | |
| MW-7 | OK | | | | | | | | | N | |
| MW-8 | OK | | | | | | | | | N | |
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Comments

# WELL CONDITION STATUS SHEET

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

Job # 25-948218.1
Event Date: 9-24-09
Sampler: SH

| WELL ID | Vault Frame Condition | Gasket/ O-Ring (M)missing | BOLTS (M) Missing (R) Replaced | Bolt Flanges B= Broken S= Stripped R=Retap | APRON Condition C=Cracked B=Broken G=Gone | Grout Seal (Deficient) inches from TOC | Casing (Condition prevents tight cap seal) | REPLACE LOCK Y / N | REPLACE CAP Y / N | WELL VAULT Manufacture/Size/ # of Bolts | Pictures Taken Yes / No |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | ok | | | S(3) | ok | | | | | BL/8"/3 | |
| MW-5 | ok | | | | | | | | | M/8"/2 | |
| MW-9 | ok | | | | | | | | | " | |
| MW-10 | ok | | | | | | | | | " | |
| MW-11 | ok | | | | | | | | | " | |
| MW-18 | ok | | 2M | ok | | | | | | " | |

**Comments**

# WELL CONDITION STATUS SHEET

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

Job # 25-948218.1
Event Date: 9-24-09
Sampler: AW

| WELL ID | Vault Frame Condition | Gasket/ O-Ring (M)missing | BOLTS (M) Missing (R) Replaced | Bolt Flanges B= Broken S= Stripped R=Retap | APRON Condition C=Cracked B=Broken G=Gone | Grout Seal (Deficient) inches from TOC | Casing (Condition prevents tight cap seal) | REPLACE LOCK Y / N | REPLACE CAP Y / N | WELL VAULT Manufacture/Size/ # of Bolts | Pictures Taken Yes / No |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-2 | OK | → | → | 3S | OK | → | → | N | N | Boart Longyr / 8" / 3 | |
| MW-17 | OK | → | → | → | → | → | → | ↓ | ↓ | morrison / 8" / 2 | |
| MW-15 | OK | → | → | → | → | → | → | ↓ | ↓ | ↓ | |
| MW-12 | OK | → | → | → | → | → | → | ↓ | ↓ | ↓ | |
| MW-14 | OK | → | → | → | → | → | → | ↓ | ↓ | ↓ | |
| MW-3 | OK | → | 2M | 2B | OK | → | → | ↓ | ↓ | | |
| MW-13 | OK | → | → | → | → | → | → | ↓ | ↓ | morrison / 12" / 2 | |
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Comments

# 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: 9-24-09 (inclusive)
City: Oakland, CA  Sampler: SH

Well ID: MW-1
Well Diameter: (2) 4 in.
Total Depth: 7.46 ft.
Depth to Water: 3.08 ft.
Date Monitored: 9-24-09

| Volume Factor (VF) | 3/4"= 0.02 | 1"= 0.04 | 2"= 0.17 | 3"= 0.38 |
|---|---|---|---|---|
| | 4"= 0.66 | 5"= 1.02 | 6"= 1.50 | t2"= 5.80 |

☐ Check if water column is less then 0.50 ft.

4.38 xVF .17 = .75 x3 case volume = Estimated Purge Volume: 2.5 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 3.96

**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): 0932  Weather Conditions: overcast
Sample Time/Date: 1000 9-24-09  Water Color: Tan  Odor: Y (N)
Approx. Flow Rate: — gpm.  Sediment Description: lt gry
Did well de-water? no  If yes, Time: — Volume: — gal.  DTW @ Sampling: 3.63

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (µmhos/cm - µS) | Temperature (C / F) | D.O. (mg/L) | ORP (mV) |
|---|---|---|---|---|---|---|
| 0936 | 1 | 6.61 | out of Range | 23.6 | | |
| 0940 | 2 | 6.72 | " | 23.8 | | |
| 0943 | 2.5 | 6.83 | " | 23.9 | | |
| | | | | | | |

**LABORATORY INFORMATION**

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| MW-1 | 7x voa vial | YES | HCL | KIFF | TPH-JET FUEL/TPH-MO/TPH-DROw/sgc(8015)/ TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260) |
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**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: 9-24-09 (inclusive)
City: Oakland, CA  Sampler: AW

Well ID: MW-2
Well Diameter: (2) 4 in.
Total Depth: 11.78 ft.
Depth to Water: 2.87 ft.
Date Monitored: 9-24-09

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

☐ Check if water column is less then 0.50 ft.

8.91 xVF .17 = 1.51 x3 case volume = Estimated Purge Volume: 4.5 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 4.65

| Purge Equipment: | | Sampling Equipment: | |
|---|---|---|---|
| Disposable Bailer | ✓ | Disposable Bailer | ✓ |
| Stainless Steel Bailer | | Pressure Bailer | |
| Stack Pump | | Discrete Bailer | |
| Suction Pump | | Peristaltic Pump | |
| Grundfos | | QED Bladder Pump | |
| Peristaltic Pump | | Other: | |
| 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): 0910  Weather Conditions: Cloudy
Sample Time/Date: 0940 / 9-24-09  Water Color: Cloudy  Odor: (N) / Slight sulfur
Approx. Flow Rate: — gpm.  Sediment Description: Cloudy
Did well de-water? N  If yes, Time: — Volume: — gal. DTW @ Sampling: 4.19

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (µmhos/cm (µS)) | Temperature (C / F) | D.O. (mg/L) | ORP (mV) |
|---|---|---|---|---|---|---|
| 0916 | 1.5 | 6.45 | out of range | 22.5 | | |
| 0921 | 3.0 | 6.57 | ↓ | 22.5 | | |
| 0927 | 4.5 | 6.62 | | 22.5 | | |
| | | | | | | |

### LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| MW-2 | 7 x voa vial | YES | HCL | KIFF | TPH-JET FUEL/TPH-MO/TPH-DROw/sgc(8015)/ TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260) |
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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: 9-24-09 (inclusive)
City: Oakland, CA | Sampler: AW

Well ID: MW-3
Well Diameter: (2) 4 in.
Total Depth: 12.06 ft.
Depth to Water: 4.33 ft.
Date Monitored: 9-24-09

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

☐ Check if water column is less then 0.50 ft.

7.73 xVF .17 = 1.31 x3 case volume = Estimated Purge Volume: 4.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.88

**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): 1240 | Weather Conditions: Sunny
Sample Time/Date: 1310 / 9-24-09 | Water Color: Cloudy | Odor: Y / (N)
Approx. Flow Rate: — gpm. | Sediment Description: Cloudy
Did well de-water? N | If yes, Time: — | Volume: — gal. | DTW @ Sampling: 5.09

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (µmhos/cm (µS)) | Temperature (C / F) | D.O. (mg/L) | ORP (mV) |
|---|---|---|---|---|---|---|
| 1246 | 1.5 | 6.73 | 3719 | 21.7 | | |
| 1252 | 3.0 | 6.77 | out of range | 21.6 | | |
| 1300 | 4.0 | 6.82 | ↓ | 21.6 | | |
| | | | | | | |

**LABORATORY INFORMATION**

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| MW-3 | 7 x voa vial | YES | HCL | KIFF | TPH-JET FUEL/TPH-MO/TPH-DROw/sgc(8015)/ TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260) |
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**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: 9/24/05 (inclusive)
City: Oakland, CA  Sampler: JH

Well ID MW-4  Date Monitored: 9/24/05
Well Diameter Ø4 in.
Total Depth 9.89 ft.
Depth to Water 5.85 ft.

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

☐ Check if water column is less then 0.50 ft.

4.04 xVF .17 = .68 x3 case volume = Estimated Purge Volume: 2.06 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 6.65

| Purge Equipment: | | Sampling Equipment: | |
|---|---|---|---|
| Disposable Bailer | X | Disposable Bailer | X |
| Stainless Steel Bailer | | Pressure Bailer | |
| Stack Pump | | Discrete Bailer | |
| Suction Pump | | Peristaltic Pump | |
| Grundfos | | QED Bladder Pump | |
| Peristaltic Pump | | Other: | |
| 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): 1330  Weather Conditions: Cloudy
Sample Time/Date: 1400 / 9/24/05  Water Color: cloudy  Odor: Y / (N)
Approx. Flow Rate: — gpm.  Sediment Description: 1.5 W
Did well de-water? no  If yes, Time: ____ Volume: ____ gal. DTW @ Sampling: 6.20

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (µmhos/cm - (S)) | Temperature (C / F) | D.O. (mg/L) | ORP (mV) |
|---|---|---|---|---|---|---|
| 1332 | .75 | 7.35 | 822 | 20.1 | | |
| 1334 | 1.5 | 7.20 | 849 | 20.4 | | |
| 1337 | 2.0 | 7.11 | 904 | 20.2 | | |
| | | | | | | |

### LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| | 7 x voa vial | YES | HCL | KIFF | TPH-JET FUEL/TPH-MO/TPH-DROw/sgc(8015)/ TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260) |
| MW-4 | | | | | |
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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: 9-24-09 (inclusive)
Sampler: SH

Well ID: MW-5
Well Diameter: 2 4 in.
Total Depth: 9.87 ft.
Depth to Water: 4.47 ft.

Date Monitored: 9-24-09

| Volume Factor (VF) | 3/4"= 0.02 | 1"= 0.04 | 2"= 0.17 | 3"= 0.38 |
|---|---|---|---|---|
| | 4"= 0.66 | 5"= 1.02 | 6"= t.50 | 12"= 5.80 |

☐ Check if water column is less then 0.50 ft.

5.40 xVF .17 = 1 x3 case volume = Estimated Purge Volume: 3 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: ~~4.87~~ 5.53

**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): 1013
Sample Time/Date: 1045 / 9-24-09
Approx. Flow Rate: — gpm.
Did well de-water? NO If yes, Time: — Volume: — gal. DTW @ Sampling: 5.37

Weather Conditions: overcast
Water Color: Grey Odor: Y (N)
Sediment Description: mod

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (µmhos/cm - µS) | Temperature (C / F) | D.O. (mg/L) | ORP (mV) |
|---|---|---|---|---|---|---|
| 1020 | 1 | 6.56 | Out of Range | 23.5 | | |
| 1025 | 2 | 6.63 | " | 23.3 | | |
| 1029 | 3 | 6.68 | " | 23.2 | | |
| | | | | | | |

### LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| MW-5 | 7 x voa vial | YES | HCL | KIFF | TPH-JET FUEL/TPH-MO/TPH-DROw/sgc(8015)/ TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260) |
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**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: 9/24/05 (inclusive)
City: Oakland, CA | Sampler: JH

Well ID: MW-6 | Date Monitored: 9/24/05
Well Diameter: (2)4 in.
Total Depth: 10.00 ft.
Depth to Water: 5.60 ft.

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

☐ Check if water column is less then 0.50 ft.

4.40 xVF .17 = .74 x3 case volume = Estimated Purge Volume: 2.24 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 6.48

**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): 1250 | Weather Conditions: Cloudy
Sample Time/Date: 1315 / 9/24/05 | Water Color: Clay | Odor: Y / (N)
Approx. Flow Rate: ~ gpm. | Sediment Description: 1.5 FT
Did well de-water? NO If yes, Time: Volume: gal. DTW @ Sampling: 6.23

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (µmhos/cm - (µS)) | Temperature ((C) / F) | D.O. (mg/L) | ORP (mV) |
|---|---|---|---|---|---|---|
| 1253 | .75 | 7.32 | 1075 | 21.0 | | |
| 1256 | 1.5 | 7.40 | 1054 | 20.7 | | |
| 1300 | 2.25 | 7.37 | 1102 | 20.6 | | |
| | | | | | | |

### LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| MW-6 | 6 x voa vial | YES | HCL | KIFF | TPH-JET FUEL/TPH-MO/TPH-DROw/sgc(8015)/ TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260) |
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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: 9/24/05 (inclusive)
City: Oakland, CA | Sampler: JH

Well ID: MW-7
Well Diameter: (2)1 4 in.
Total Depth: 10.00 ft.
Depth to Water: 5.38 ft.
Date Monitored: 9/24/05

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

☐ Check if water column is less then 0.50 ft.

4.62 xVF .17 = .78 x3 case volume = Estimated Purge Volume: 2.35 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 6.30

**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): 1145
Sample Time/Date: 1230 / 9/24/05
Approx. Flow Rate: — gpm.
Did well de-water? No If yes, Time: Volume: gal.
Weather Conditions: Cloudy
Water Color: Clear Odor: Y / (N)
Sediment Description: Light
DTW @ Sampling: 6.25

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (µmhos/cm - (S)) | Temperature ( (C) / F ) | D.O. (mg/L) | ORP (mV) |
|---|---|---|---|---|---|---|
| 1148 | .75 | 7.41 | 1887 | 20.8 | | |
| 1151 | 1.5 | 7.35 | 1960 | 20.3 | | |
| 1154 | 2.25 | 7.30 | 2003 | 20.1 | | |
| | | | | | | |

### LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| | 7 x voa vial | YES | HCL | KIFF | TPH-JET FUEL/TPH-MO/TPH-DROw/sgc(8015)/ TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260) |
| MW-7 | | | | | |
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**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: 9/24/09 (inclusive)
City: Oakland, CA | Sampler: JH

Well ID: MW-8 | Date Monitored: 9/24/09
Well Diameter: (2) 4 in.
Total Depth: 9.98 ft.
Depth to Water: 4.32 ft. ☐ Check if water column is less then 0.50 ft.

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

5.66 xVF .17 = .96 x3 case volume = Estimated Purge Volume: 2.88 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.45

**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): 0930 | Weather Conditions: cloudy
Sample Time/Date: 0950 / 9/24/09 | Water Color: cloudy | Odor: (Y) / N | 1.3 HS
Approx. Flow Rate: — gpm. | Sediment Description: 1.3 HS
Did well de-water? NO If yes, Time: Volume: gal. DTW @ Sampling: 5.30

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (µmhos/cm - µS) | Temperature ( C / F ) | D.O. (mg/L) | ORP (mV) |
|---|---|---|---|---|---|---|
| 0934 | 1 | 7.72 | 1562 | 21.5 | | |
| 0938 | 2 | 7.63 | 1598 | 21.2 | | |
| 0942 | 3 | 7.40 | 1635 | 21.0 | | |
| | | | | | | |

### LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| MW-7 | 7 x voa vial | YES | HCL | KIFF | TPH-JET FUEL/TPH-MO/TPH-DROw/sgc(8015)/ TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260) |
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**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: 9-24-09 (inclusive)

City: **Oakland, CA** Sampler: SH

Well ID MW-9 Date Monitored: SH

Well Diameter (2) 4 in.

Total Depth 9.98 ft.

Depth to Water 5.53 ft.

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

☐ Check if water column is less then 0.50 ft.

4.45 xVF .17 = 0.75 x3 case volume = Estimated Purge Volume: 2.5 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:
Product Transferred to:

Start Time (purge): 1223 Weather Conditions: Clear

Sample Time/Date: 1255 / 9-24-09 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: 5.93

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (µmhos/cm - µS) | Temperature (C F) | D.O. (mg/L) | ORP (mV) |
|---|---|---|---|---|---|---|
| 1227 | 1 | 7.12 | 1229 | 22.8 | | |
| 1231 | 2 | 7.10 | 1237 | 22.3 | | |
| 1236 | 2.5 | 7.06 | 1242 | 22.7 | | |
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### LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| MW-9 | 7 x voa vial | YES | HCL | KIFF | TPH-JET FUEL/TPH-MO/TPH-DROw/sgc(8015)/ TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260) |
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**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: 9-24-09 (inclusive)
City: **Oakland, CA** Sampler: SH

Well ID MW-10
Well Diameter (2) 4 in. (0.17)
Total Depth ~~9.61~~ ft.
Depth to Water 3.61 ft.
Date Monitored: 9-24-09

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

☐ Check if water column is less then 0.50 ft.

6.50 xVF .17 = 1.12 x3 case volume = Estimated Purge Volume: 3.5 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 4.91

| Purge Equipment: | | Sampling Equipment: | |
|---|---|---|---|
| Disposable Bailer | X | Disposable Bailer | X |
| Stainless Steel Bailer | | Pressure Bailer | |
| Stack Pump | | Discrete Bailer | |
| Suction Pump | | Peristaltic Pump | |
| Grundfos | | QED Bladder Pump | |
| Peristaltic Pump | | Other: | |
| 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): 1103 Weather Conditions: overcast
Sample Time/Date: 1135 / 9-24-09 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: 4.21

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (µmhos/cm - µS) | Temperature (C / F) | D.O. (mg/L) | ORP (mV) |
|---|---|---|---|---|---|---|
| 1107 | 1 | 6.63 | out of Range | 22.6 | | |
| 1111 | 2 | 6.72 | 11 | 22.4 | | |
| 1117 | 3.5 | 6.61 | 11 | 22.3 | | |
| | | | | | | |

### LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| MW-10 | 4 x voa vial | YES | HCL | KIFF | TPH-JET FUEL/TPH-MO/TPH-DROw/sgc(8015)/ TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260) |
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**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: 9-24-09 (inclusive)
City: **Oakland, CA** Sampler: SH

Well ID MW-11 Date Monitored: 9-24-09
Well Diameter (2) 4 in.
Total Depth 10.00 ft.
Depth to Water 3.37 ft.

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

☐ Check if water column is less then 0.50 ft.

6.63 xVF .17 = 1.13 x3 case volume = Estimated Purge Volume: $3.5 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 4.70

| Purge Equipment: | | Sampling Equipment: | |
|---|---|---|---|
| Disposable Bailer | X | Disposable Bailer | ✓ |
| Stainless Steel Bailer | | Pressure Bailer | |
| Stack Pump | | Discrete Bailer | |
| Suction Pump | | Peristaltic Pump | |
| Grundfos | | QED Bladder Pump | |
| Peristaltic Pump | | Other: | |
| 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): 1149 Weather Conditions: Clear
Sample Time/Date: 1210 / 9-24-09 Water Color: Grey Odor: Y / (N)
Approx. Flow Rate: — gpm. Sediment Description: light
Did well de-water? NO If yes, Time: — Volume: — gal. DTW @ Sampling: 4.12

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (µmhos/cm - µS) | Temperature ( C / F ) | D.O. (mg/L) | ORP (mV) |
|---|---|---|---|---|---|---|
| 1152 | 1 | 6.97 | Out of Range | 23.6 | | |
| 1156 | 2 | 6.86 | " | 23.4 | | |
| 1157 | 3.5 | 6.83 | " | 23.3 | | |
| | | | | | | |

### LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| MW-11 | 7 x voa vial | YES | HCL | KIFF | TPH-JET FUEL/TPH-MO/TPH-DROw/sgc(8015)/ TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260) |
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**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: 9-24-09 (inclusive)
Sampler: AW

Well ID: MW-12
Well Diameter: 2 | 4 in.
Total Depth: 9.86 ft.
Depth to Water: 3.38 ft.

Date Monitored: 9-24-09

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

☐ Check if water column is less then 0.50 ft.

6.48 xVF .17 = 1.10 x3 case volume = Estimated Purge Volume: 3.5 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 4.68

| Purge Equipment: | | Sampling Equipment: | |
|---|---|---|---|
| Disposable Bailer | ✓ | Disposable Bailer | ✓ |
| Stainless Steel Bailer | | Pressure Bailer | |
| Stack Pump | | Discrete Bailer | |
| Suction Pump | | Peristaltic Pump | |
| Grundfos | | QED Bladder Pump | |
| Peristaltic Pump | | Other: | |
| QED Bladder Pump | | | |
| Other: | | | |

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

Start Time (purge): 1110
Sample Time/Date: 1138 / 9-24-09
Approx. Flow Rate: — gpm.
Did well de-water? N If yes, Time: — Volume: — gal.

Weather Conditions: Cloudy
Water Color: Black Odor: Y / (N)
Sediment Description: Cloudy
DTW @ Sampling: 4.29

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (µmhos/cm) | Temperature (C / F) | D.O. (mg/L) | ORP (mV) |
|---|---|---|---|---|---|---|
| 1114 | 1.0 | 6.93 | Out of range | 23.7 | | |
| 1118 | 2.0 | 7.01 | ↓ | 24.2 | | |
| 1123 | 3.5 | 7.00 | | 24.3 | | |
| | | | | | | |

### LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| MW-12 | 7 x voa vial | YES | HCL | KIFF | TPH-JET FUEL/TPH-MO/TPH-DROw/sgc(8015)/ TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260) |
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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: 9-24-09 (inclusive)
City: **Oakland, CA** Sampler: AW

Well ID: MW-13
Well Diameter: 2 (4) in.
Total Depth: 9.50 ft.
Depth to Water: 2.81 ft.
Date Monitored: 9-24-09

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

☐ Check if water column is less then 0.50 ft.

6.69 xVF .66 = 4.41 x3 case volume = Estimated Purge Volume: 13.5 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 4.15

**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): 1320
Sample Time/Date: 1345 / 9-24-09
Approx. Flow Rate: ~2.0 gpm.
Did well de-water? N If yes, Time: — Volume: — gal. DTW @ Sampling: 4.01

Weather Conditions: Sunny
Water Color: clear yellow Odor: (Y) / N sulfur
Sediment Description: Clear

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (µmhos/cm (mS)) | Temperature (C / F) | D.O. (mg/L) | ORP (mV) |
|---|---|---|---|---|---|---|
| 1323 | 4.5 | 6.65 | out of range | 23.3 | | |
| 1326 | 9.0 | 6.68 | ↓ | 23.5 | | |
| 1330 | 13.5 | 6.70 | | 23.7 | | |
| | | | | | | |

**LABORATORY INFORMATION**

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| MW-13 | 7 x voa vial | YES | HCL | KIFF | TPH-JET FUEL/TPH-MO/TPH-DROw/sgc(8015)/ TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260) |
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**COMMENTS:** Slight reaction w/ HCl.

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: 9-24-09 (inclusive)
City: Oakland, CA | Sampler: AW

Well ID: MW-14
Well Diameter: 2 (4) in.
Total Depth: 10.04 ft.
Depth to Water: 2.47 ft.
Date Monitored: 9-24-09

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

☐ Check if water column is less then 0.50 ft.

7.57 xVF .17 = 1.29 x3 case volume = Estimated Purge Volume: 4.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 3.98

| Purge Equipment: | | Sampling Equipment: | |
|---|---|---|---|
| Disposable Bailer | ✓ | Disposable Bailer | ✓ |
| Stainless Steel Bailer | | Pressure Bailer | |
| Stack Pump | | Discrete Bailer | |
| Suction Pump | | Peristaltic Pump | |
| Grundfos | | QED Bladder Pump | |
| Peristaltic Pump | | Other: | |
| 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): 1155 | Weather Conditions: Cloudy
Sample Time/Date: 1225 / 9-24-09 | Water Color: Cloudy | Odor: Y / (N)
Approx. Flow Rate: — gpm. | Sediment Description: Cloudy
Did well de-water? N | If yes, Time: — | Volume: — gal. | DTW @ Sampling: 3.69

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (µmhos/cm - µS) | Temperature (C / F) | D.O. (mg/L) | ORP (mV) |
|---|---|---|---|---|---|---|
| 1200 | 1.5 | 7.39 | out of range | 24.2 | | |
| 1205 | 3.0 | 7.38 | ↓ | 24.2 | | |
| 1211 | 4.0 | 7.36 | ↓ | 24.1 | | |
| | | | | | | |

### LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| MW-14 | 7 x voa vial | YES | HCL | KIFF | TPH-JET FUEL/TPH-MO/TPH-DROw/sgc(8015)/ TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260) |
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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: 9-24-09 (inclusive)
City: **Oakland, CA** Sampler: AW

Well ID MW-15
Well Diameter (2) 4 in.
Total Depth 9.95 ft.
Depth to Water 4.75 ft.
Date Monitored: 9-24-09

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

☐ Check if water column is less then 0.50 ft.

5.20 xVF .17 = 0.88 x3 case volume = Estimated Purge Volume: 3.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.79

**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): 1030
Sample Time/Date: 1055 / 9-24-09
Approx. Flow Rate: — gpm.
Did well de-water? N If yes, Time: — Volume: — gal.
Weather Conditions: Cloudy
Water Color: Dark Odor: Y / (N)
Sediment Description: Cloudy
DTW @ Sampling: 5.22

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (µmhos/cm - µS) | Temperature ( C / F ) | D.O. (mg/L) | ORP (mV) |
|---|---|---|---|---|---|---|
| 1033 | 1.0 | 6.83 | Out of range | 23.1 | | |
| 1036 | 2.0 | 6.84 | ↓ | 23.3 | | |
| 1040 | 3.0 | 6.82 | ↓ | 23.9 | | |
| | | | | | | |

### LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| MW-15 | 7 x voa vial | YES | HCL | KIFF | TPH-JET FUEL/TPH-MO/TPH-DROw/sgc(8015)/ TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260) |
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**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: 9-24-09 (inclusive)
Sampler: AW

Well ID: MW-17
Well Diameter: 2 4 in.
Total Depth: 9.79 ft.
Depth to Water: 29.7 ft.

Date Monitored: 9-24-09

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

☐ Check if water column is less then 0.50 ft.

6.82 xVF .17 = 1.16 x3 case volume = Estimated Purge Volume: 4.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 4.33

| Purge Equipment: | | Sampling Equipment: | |
|---|---|---|---|
| Disposable Bailer | ✓ | Disposable Bailer | ✓ |
| Stainless Steel Bailer | | Pressure Bailer | |
| Stack Pump | | Discrete Bailer | |
| Suction Pump | | Peristaltic Pump | |
| Grundfos | | QED Bladder Pump | |
| Peristaltic Pump | | Other: | |
| 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): 0950
Sample Time/Date: 1015 / 9-24-09
Approx. Flow Rate: — gpm.
Did well de-water? N If yes, Time: — Volume: — gal.

Weather Conditions: Cloudy
Water Color: yellow Odor: Y / (N)
Sediment Description: Cloudy
DTW @ Sampling: 4.02

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (µmhos/cm) (uS) | Temperature (C / F) | D.O. (mg/L) | ORP (mV) |
|---|---|---|---|---|---|---|
| 0955 | 1.5 | 6.90 | out of range | 21.6 | | |
| 1000 | 3.0 | 6.91 | ↓ | 21.0 | | |
| 1005 | 4.0 | 6.93 | | 21.0 | | |
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### LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| MW-17 | 7 x voa vial | YES | HCL | KIFF | TPH-JET FUEL/TPH-MO/TPH-DROw/sgc(8015)/ TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260) |
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COMMENTS: Morrison / 8" / 2 - OK
* Slight reaction w/ HCl *

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: 9-24-09 (inclusive)

City: **Oakland, CA** Sampler: SH

Well ID MW-18

Well Diameter 2 | 4 in.

Total Depth 9.92 ft.

Depth to Water 3.57 ft.

Date Monitored: 9-24-09

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

☐ Check if water column is less then 0.50 ft.

6.35 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

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

**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: 1305 (2400 hrs)
Time Completed: 1340 (2400 hrs)
Depth to Product: 3.11 ft
Depth to Water: 3.57 ft
Hydrocarbon Thickness: 0.46 ft
Visual Confirmation/Description: Black thick Oil
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: _____ gal
Amt Removed from Well: 9 ~~gal~~ 02
Water Removed: _____
Product Transferred to: Drum

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) |
|---|---|---|---|---|---|---|
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### LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| | x voa vial | YES | HCL | KIFF | TPH-JET FUEL/TPH-MO/TPH-DROw/sgc(8015)/ TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260) |
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**COMMENTS:** Skimmer in well 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 | Job Number: 25-948218.1
Site Address: 6701 Old Earhart Road | Event Date: 9/24/09 (inclusive)
City: Oakland, CA | Sampler: JH

Well ID: NPORL MW-3 | Date Monitored: 9/24/09
Well Diameter: 2/(4) in.
Total Depth: 16.38 ft.
Depth to Water: 4.19 ft. ☐ Check if water column is less then 0.50 ft.

| Volume Factor (VF) | 3/4"= 0.02 | 1"= 0.04 | 2"= 0.17 | 3"= 0.38 |
|---|---|---|---|---|
| | 4"= 0.66 | 5"= 1.02 | 6"= t.50 | 12"= 5.80 |

12.19 xVF .66 = 8.04 x3 case volume = Estimated Purge Volume: 24.13 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 6.62

**Purge Equipment:**
Disposable Bailer: ____
Stainless Steel Bailer: ____
Stack Pump: X
Suction Pump: ____
Grundfos: ____
Peristaltic Pump: ____
QED Bladder Pump: ____
Other: ____

**Sampling Equipment:**
Disposable Bailer: X
Pressure Bailer: ____
Discrete Bailer: ____
Peristaltic Pump: ____
QED Bladder Pump: ____
Other: ____

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

Start Time (purge): 1100 | Weather Conditions: Cloudy
Sample Time/Date: 1135 / 9/24/09 | Water Color: cloudy | Odor: Y / (N)
Approx. Flow Rate: 2 gpm. | Sediment Description: 1.5 HY
Did well de-water? No | If yes, Time: ____ Volume: ____ gal. DTW @ Sampling: 6.15

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (µmhos/cm - (S)) | Temperature ((C) / F) | D.O. (mg/L) | ORP (mV) |
|---|---|---|---|---|---|---|
| 1104 | 8 | 7.39 | out of Range | 20.8 | | |
| 1108 | 16 | 7.20 | ↓ | 20.2 | | |
| 1112 | 24 | 7.15 | ↓ | 20.1 | | |
| | | | | | | |

**LABORATORY INFORMATION**

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| NPortmw-3 | 7 x voa vial | YES | HCL | KIFF | TPH-JET FUEL/TPH-MO/TPH-DROw/sgc(8015)/ TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260) |
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**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: 9/24/09 (inclusive)
City: Oakland, CA  Sampler: JH

Well ID NPORD MW-4  Date Monitored: 9/24/09
Well Diameter (2)/4 in.
Total Depth 18.20 ft.
Depth to Water 6.20 ft.

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

☐ Check if water column is less then 0.50 ft.

12.00 xVF .17 = 2.04 x3 case volume = Estimated Purge Volume: 6.12 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 8.60

**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): 1005  Weather Conditions: cloudy
Sample Time/Date: 1040 / 9/24/09  Water Color: cloudy  Odor: (Y) N / 1.3 HC
Approx. Flow Rate: — gpm.  Sediment Description: 1.3 HC
Did well de-water? no  If yes, Time: ____ Volume: ____ gal. DTW @ Sampling: 8.35

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (µmhos/cm - µS) | Temperature ( C / F ) | D.O. (mg/L) | ORP (mV) |
|---|---|---|---|---|---|---|
| 1011 | 2 | 7.64 | 2985 | 20.8 | | |
| 1017 | 4 | 7.55 | 3044 | 20.5 | | |
| 1024 | 6 | 7.30 | 3081 | 20.4 | | |
| | | | | | | |

### LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| | 7 x voa vial | YES | HCL | KIFF | TPH-JET FUEL/TPH-MO/TPH-DROw/sgc(8015)/ TPH-GRO/BTEX/MTBE/NAPHTHALENE(8260) |
| NPORDMW4 | | | | | |
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COMMENTS: 2-Tubes in well.

Add/Replaced Lock: ____ Add/Replaced Plug: ____ Add/Replaced Bolt: ____

KIFF Analytical LLC

Report Number : 70204
Date : 10/06/2009

Geoffrey Risse
Gettler-Ryan Inc.
3140 Gold Camp Dr. Suite 170
Rancho Cordova, CA 95670

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

Dear Mr. Risse,

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.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

KIFF Analytical LLC

Report Number : 70204
Date : 10/06/2009

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

# Case Narrative

Repeat analysis by Modified EPA Method 8015 yielded inconsistent results for sample NPORDMW-4.
The concentrations appear to vary between the bottles. The highest concentration results are reported.

KIFF Analytical LLC

Report Number : 70204
Date : 10/06/2009

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

Sample : **QA** Matrix : Water Lab Number : 70204-01
Sample Date :09/24/2009

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 09/28/2009 |
| **Naphthalene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| 1,2-Dichloroethane-d4 (Surr) | 101 | | % Recovery | EPA 8260B | 09/28/2009 |
| Toluene - d8 (Surr) | 99.9 | | % Recovery | EPA 8260B | 09/28/2009 |
| 4-Bromofluorobenzene (Surr) | 98.3 | | % Recovery | EPA 8260B | 09/28/2009 |

KIFF Analytical LLC

Report Number : 70204
Date : 10/06/2009

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

Sample : **MW-1** Matrix : Water Lab Number : 70204-02
Sample Date :09/24/2009

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 09/29/2009 |
| **Naphthalene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| 1,2-Dichloroethane-d4 (Surr) | 101 | | % Recovery | EPA 8260B | 09/29/2009 |
| Toluene - d8 (Surr) | 99.3 | | % Recovery | EPA 8260B | 09/29/2009 |
| 4-Bromofluorobenzene (Surr) | 96.4 | | % Recovery | EPA 8260B | 09/29/2009 |
| **TPH as Motor Oil** | **< 100** | 100 | ug/L | M EPA 8015 | 09/30/2009 |
| **TPH as Diesel (w/ Silica Gel)** | **< 50** | 50 | ug/L | M EPA 8015 | 09/30/2009 |
| **TPH as Jet Fuel** | **< 50** | 50 | ug/L | M EPA 8015 | 09/30/2009 |
| Octacosane (Diesel Surrogate) | 115 | | % Recovery | M EPA 8015 | 09/30/2009 |
| Octacosane (Silica Gel Surr) | 108 | | % Recovery | M EPA 8015 | 09/30/2009 |

KIFF Analytical LLC

Report Number : 70204
Date : 10/06/2009

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

Sample : **MW-2** Matrix : Water Lab Number : 70204-03
Sample Date :09/24/2009

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 09/29/2009 |
| **Naphthalene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| 1,2-Dichloroethane-d4 (Surr) | 101 | | % Recovery | EPA 8260B | 09/29/2009 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 09/29/2009 |
| 4-Bromofluorobenzene (Surr) | 98.9 | | % Recovery | EPA 8260B | 09/29/2009 |
| **TPH as Motor Oil** | **< 100** | 100 | ug/L | M EPA 8015 | 09/30/2009 |
| **TPH as Diesel (w/ Silica Gel)** | **< 50** | 50 | ug/L | M EPA 8015 | 09/30/2009 |
| **TPH as Jet Fuel** | **< 50** | 50 | ug/L | M EPA 8015 | 09/30/2009 |
| Octacosane (Diesel Surrogate) | 117 | | % Recovery | M EPA 8015 | 09/30/2009 |
| Octacosane (Silica Gel Surr) | 110 | | % Recovery | M EPA 8015 | 09/30/2009 |

KIFF Analytical LLC

Report Number : 70204
Date : 10/06/2009

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

Sample : **MW-3** Matrix : Water Lab Number : 70204-04
Sample Date :09/24/2009

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Methyl-t-butyl ether (MTBE)** | **0.70** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 09/29/2009 |
| **Naphthalene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| 1,2-Dichloroethane-d4 (Surr) | 102 | | % Recovery | EPA 8260B | 09/29/2009 |
| Toluene - d8 (Surr) | 101 | | % Recovery | EPA 8260B | 09/29/2009 |
| 4-Bromofluorobenzene (Surr) | 97.1 | | % Recovery | EPA 8260B | 09/29/2009 |
| **TPH as Motor Oil** | **< 100** | 100 | ug/L | M EPA 8015 | 10/05/2009 |
| **TPH as Diesel (w/ Silica Gel)** | **< 50** | 50 | ug/L | M EPA 8015 | 10/06/2009 |
| **TPH as Jet Fuel** | **400** | 50 | ug/L | M EPA 8015 | 10/05/2009 |
| Octacosane (Diesel Surrogate) | 93.8 | | % Recovery | M EPA 8015 | 10/05/2009 |
| Octacosane (Silica Gel Surr) | 114 | | % Recovery | M EPA 8015 | 10/06/2009 |

KIFF Analytical LLC

Report Number : 70204
Date : 10/06/2009

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

Sample : **MW-4** Matrix : Water Lab Number : 70204-05
Sample Date :09/24/2009

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 09/29/2009 |
| **Naphthalene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| 1,2-Dichloroethane-d4 (Surr) | 100 | | % Recovery | EPA 8260B | 09/29/2009 |
| Toluene - d8 (Surr) | 99.8 | | % Recovery | EPA 8260B | 09/29/2009 |
| 4-Bromofluorobenzene (Surr) | 97.2 | | % Recovery | EPA 8260B | 09/29/2009 |
| **TPH as Motor Oil** | **1100** | 100 | ug/L | M EPA 8015 | 10/02/2009 |
| **TPH as Diesel (w/ Silica Gel)** | **1300** | 50 | ug/L | M EPA 8015 | 10/05/2009 |
| **TPH as Jet Fuel** | **1700** | 50 | ug/L | M EPA 8015 | 10/02/2009 |
| (Note: Higher boiling hydrocarbons present, atypical for Jet Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | 107 | | % Recovery | M EPA 8015 | 10/02/2009 |
| Octacosane (Silica Gel Surr) | 112 | | % Recovery | M EPA 8015 | 10/05/2009 |

KIFF Analytical LLC

Report Number : 70204
Date : 10/06/2009

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

Sample : **MW-5** Matrix : Water Lab Number : 70204-06
Sample Date :09/24/2009

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 09/29/2009 |
| **Naphthalene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| 1,2-Dichloroethane-d4 (Surr) | 103 | | % Recovery | EPA 8260B | 09/29/2009 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 09/29/2009 |
| 4-Bromofluorobenzene (Surr) | 96.5 | | % Recovery | EPA 8260B | 09/29/2009 |
| **TPH as Motor Oil** | **3000** | 100 | ug/L | M EPA 8015 | 10/06/2009 |
| **TPH as Diesel (w/ Silica Gel)** | **1400** | 50 | ug/L | M EPA 8015 | 10/06/2009 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| **TPH as Jet Fuel** | **1400** | 50 | ug/L | M EPA 8015 | 10/06/2009 |
| (Note: Higher boiling hydrocarbons present, atypical for Jet Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | 82.2 | | % Recovery | M EPA 8015 | 10/06/2009 |
| Octacosane (Silica Gel Surr) | 83.1 | | % Recovery | M EPA 8015 | 10/06/2009 |

KIFF Analytical LLC

Report Number : 70204
Date : 10/06/2009

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

Sample : **MW-6** Matrix : Water Lab Number : 70204-07
Sample Date :09/24/2009

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 09/29/2009 |
| **Naphthalene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| 1,2-Dichloroethane-d4 (Surr) | 102 | | % Recovery | EPA 8260B | 09/29/2009 |
| Toluene - d8 (Surr) | 99.1 | | % Recovery | EPA 8260B | 09/29/2009 |
| 4-Bromofluorobenzene (Surr) | 97.1 | | % Recovery | EPA 8260B | 09/29/2009 |
| **TPH as Motor Oil** | **3400** | 100 | ug/L | M EPA 8015 | 10/06/2009 |
| **TPH as Diesel (w/ Silica Gel)** | **1100** | 50 | ug/L | M EPA 8015 | 10/06/2009 |
| (Note: Some hydrocarbons lower-boiling, some higher-boiling than Diesel.) | | | | | |
| **TPH as Jet Fuel** | **860** | 50 | ug/L | M EPA 8015 | 10/06/2009 |
| (Note: Higher boiling hydrocarbons present, atypical for Jet Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | 109 | | % Recovery | M EPA 8015 | 10/06/2009 |
| Octacosane (Silica Gel Surr) | 100 | | % Recovery | M EPA 8015 | 10/06/2009 |

KIFF Analytical LLC

Report Number : 70204
Date : 10/06/2009

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

Sample : **MW-7** Matrix : Water Lab Number : 70204-08
Sample Date :09/24/2009

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 09/29/2009 |
| **Naphthalene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| 1,2-Dichloroethane-d4 (Surr) | 100 | | % Recovery | EPA 8260B | 09/29/2009 |
| Toluene - d8 (Surr) | 99.7 | | % Recovery | EPA 8260B | 09/29/2009 |
| 4-Bromofluorobenzene (Surr) | 96.7 | | % Recovery | EPA 8260B | 09/29/2009 |
| **TPH as Motor Oil** | **2600** | 100 | ug/L | M EPA 8015 | 10/05/2009 |
| **TPH as Diesel (w/ Silica Gel)** | **950** | 50 | ug/L | M EPA 8015 | 10/06/2009 |
| (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.) | | | | | |
| **TPH as Jet Fuel** | **980** | 50 | ug/L | M EPA 8015 | 10/05/2009 |
| (Note: Higher boiling hydrocarbons present, atypical for Jet Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | 119 | | % Recovery | M EPA 8015 | 10/05/2009 |
| Octacosane (Silica Gel Surr) | 122 | | % Recovery | M EPA 8015 | 10/06/2009 |

KIFF Analytical LLC

Report Number : 70204
Date : 10/06/2009

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

Sample : **MW-8** Matrix : Water Lab Number : 70204-09
Sample Date :09/24/2009

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 09/29/2009 |
| **Naphthalene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| 1,2-Dichloroethane-d4 (Surr) | 101 | | % Recovery | EPA 8260B | 09/29/2009 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 09/29/2009 |
| 4-Bromofluorobenzene (Surr) | 95.1 | | % Recovery | EPA 8260B | 09/29/2009 |
| **TPH as Motor Oil** | **330** | 100 | ug/L | M EPA 8015 | 10/02/2009 |
| **TPH as Diesel (w/ Silica Gel)** | **130** | 50 | ug/L | M EPA 8015 | 10/05/2009 |
| (Note: Some hydrocarbons lower-boiling, some higher-boiling than Diesel.) | | | | | |
| **TPH as Jet Fuel** | **340** | 50 | ug/L | M EPA 8015 | 10/02/2009 |
| (Note: Higher boiling hydrocarbons present, atypical for Jet Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | 97.7 | | % Recovery | M EPA 8015 | 10/02/2009 |
| Octacosane (Silica Gel Surr) | 106 | | % Recovery | M EPA 8015 | 10/05/2009 |

KIFF Analytical LLC

Report Number : 70204
Date : 10/06/2009

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

Sample : **MW-9** Matrix : Water Lab Number : 70204-10
Sample Date :09/24/2009

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 09/29/2009 |
| **Naphthalene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| 1,2-Dichloroethane-d4 (Surr) | 102 | | % Recovery | EPA 8260B | 09/29/2009 |
| Toluene - d8 (Surr) | 99.6 | | % Recovery | EPA 8260B | 09/29/2009 |
| 4-Bromofluorobenzene (Surr) | 96.7 | | % Recovery | EPA 8260B | 09/29/2009 |
| **TPH as Motor Oil** | **1100** | 100 | ug/L | M EPA 8015 | 10/06/2009 |
| **TPH as Diesel (w/ Silica Gel)** | **600** | 50 | ug/L | M EPA 8015 | 10/06/2009 |
| (Note: Some hydrocarbons lower-boiling, some higher-boiling than Diesel.) | | | | | |
| **TPH as Jet Fuel** | **720** | 50 | ug/L | M EPA 8015 | 10/06/2009 |
| (Note: Higher boiling hydrocarbons present, atypical for Jet Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | 122 | | % Recovery | M EPA 8015 | 10/06/2009 |
| Octacosane (Silica Gel Surr) | 113 | | % Recovery | M EPA 8015 | 10/06/2009 |

KIFF Analytical LLC

Report Number : 70204
Date : 10/06/2009

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

Sample : **MW-10** Matrix : Water Lab Number : 70204-11
Sample Date :09/24/2009

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Total Xylenes** | **0.69** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 09/29/2009 |
| **Naphthalene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| 1,2-Dichloroethane-d4 (Surr) | 101 | | % Recovery | EPA 8260B | 09/29/2009 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 09/29/2009 |
| 4-Bromofluorobenzene (Surr) | 97.4 | | % Recovery | EPA 8260B | 09/29/2009 |
| **TPH as Motor Oil** | **600** | 100 | ug/L | M EPA 8015 | 10/06/2009 |
| **TPH as Diesel (w/ Silica Gel)** | **480** | 50 | ug/L | M EPA 8015 | 10/06/2009 |
| (Note: Some hydrocarbons lower-boiling, some higher-boiling than Diesel.) | | | | | |
| **TPH as Jet Fuel** | **1100** | 50 | ug/L | M EPA 8015 | 10/06/2009 |
| (Note: Higher boiling hydrocarbons present, atypical for Jet Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | 117 | | % Recovery | M EPA 8015 | 10/06/2009 |
| Octacosane (Silica Gel Surr) | 120 | | % Recovery | M EPA 8015 | 10/06/2009 |

KIFF Analytical LLC

Report Number : 70204
Date : 10/06/2009

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

Sample : **MW-11** Matrix : Water Lab Number : 70204-12
Sample Date :09/24/2009

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 09/29/2009 |
| **Naphthalene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| 1,2-Dichloroethane-d4 (Surr) | 99.1 | | % Recovery | EPA 8260B | 09/29/2009 |
| Toluene - d8 (Surr) | 99.8 | | % Recovery | EPA 8260B | 09/29/2009 |
| 4-Bromofluorobenzene (Surr) | 96.3 | | % Recovery | EPA 8260B | 09/29/2009 |
| **TPH as Motor Oil** | **3800** | 100 | ug/L | M EPA 8015 | 10/06/2009 |
| **TPH as Diesel (w/ Silica Gel)** | **1400** | 50 | ug/L | M EPA 8015 | 10/06/2009 |
| (Note: Some hydrocarbons lower-boiling, some higher-boiling than Diesel.) | | | | | |
| **TPH as Jet Fuel** | **1800** | 50 | ug/L | M EPA 8015 | 10/06/2009 |
| (Note: Higher boiling hydrocarbons present, atypical for Jet Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | 121 | | % Recovery | M EPA 8015 | 10/06/2009 |
| Octacosane (Silica Gel Surr) | 110 | | % Recovery | M EPA 8015 | 10/06/2009 |

KIFF Analytical LLC

Report Number : 70204
Date : 10/06/2009

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

Sample : **MW-12** Matrix : Water Lab Number : 70204-13
Sample Date :09/24/2009

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 09/28/2009 |
| **Naphthalene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| 1,2-Dichloroethane-d4 (Surr) | 99.6 | | % Recovery | EPA 8260B | 09/28/2009 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 09/28/2009 |
| 4-Bromofluorobenzene (Surr) | 98.9 | | % Recovery | EPA 8260B | 09/28/2009 |
| **TPH as Motor Oil** | **< 100** | 100 | ug/L | M EPA 8015 | 09/30/2009 |
| **TPH as Diesel (w/ Silica Gel)** | **< 50** | 50 | ug/L | M EPA 8015 | 09/30/2009 |
| **TPH as Jet Fuel** | **< 50** | 50 | ug/L | M EPA 8015 | 09/30/2009 |
| Octacosane (Diesel Surrogate) | 115 | | % Recovery | M EPA 8015 | 09/30/2009 |
| Octacosane (Silica Gel Surr) | 102 | | % Recovery | M EPA 8015 | 09/30/2009 |

KIFF Analytical LLC

Report Number : 70204
Date : 10/06/2009

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

Sample : **MW-13** Matrix : Water Lab Number : 70204-14
Sample Date :09/24/2009

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **1.5** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **Methyl-t-butyl ether (MTBE)** | **2.5** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **TPH as Gasoline** | **380** | 50 | ug/L | EPA 8260B | 09/28/2009 |
| **Naphthalene** | **6.8** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| 1,2-Dichloroethane-d4 (Surr) | 101 | | % Recovery | EPA 8260B | 09/28/2009 |
| Toluene - d8 (Surr) | 103 | | % Recovery | EPA 8260B | 09/28/2009 |
| 4-Bromofluorobenzene (Surr) | 99.7 | | % Recovery | EPA 8260B | 09/28/2009 |
| **TPH as Motor Oil** | **130** | 100 | ug/L | M EPA 8015 | 09/30/2009 |
| (Note: Hydrocarbons are lower-boiling than typical Motor Oil) | | | | | |
| **TPH as Diesel (w/ Silica Gel)** | **180** | 50 | ug/L | M EPA 8015 | 09/30/2009 |
| **TPH as Jet Fuel** | **5400** | 50 | ug/L | M EPA 8015 | 09/30/2009 |
| (Note: Higher boiling hydrocarbons present, atypical for Jet Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | 111 | | % Recovery | M EPA 8015 | 09/30/2009 |
| Octacosane (Silica Gel Surr) | 101 | | % Recovery | M EPA 8015 | 09/30/2009 |

KIFF Analytical LLC

Report Number : 70204
Date : 10/06/2009

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

Sample : **MW-15** Matrix : Water Lab Number : 70204-15
Sample Date :09/24/2009

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 09/28/2009 |
| **Naphthalene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| 1,2-Dichloroethane-d4 (Surr) | 100 | | % Recovery | EPA 8260B | 09/28/2009 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 09/28/2009 |
| 4-Bromofluorobenzene (Surr) | 100 | | % Recovery | EPA 8260B | 09/28/2009 |
| **TPH as Motor Oil** | **< 100** | 100 | ug/L | M EPA 8015 | 10/02/2009 |
| **TPH as Diesel (w/ Silica Gel)** | **< 50** | 50 | ug/L | M EPA 8015 | 09/30/2009 |
| **TPH as Jet Fuel** | **< 50** | 50 | ug/L | M EPA 8015 | 10/02/2009 |
| Octacosane (Diesel Surrogate) | 108 | | % Recovery | M EPA 8015 | 10/02/2009 |
| Octacosane (Silica Gel Surr) | 109 | | % Recovery | M EPA 8015 | 09/30/2009 |

KIFF Analytical LLC

Report Number : 70204
Date : 10/06/2009

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

Sample : **MW-14** Matrix : Water Lab Number : 70204-16
Sample Date :09/24/2009

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Methyl-t-butyl ether (MTBE)** | **0.83** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 09/29/2009 |
| **Naphthalene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| 1,2-Dichloroethane-d4 (Surr) | 100 | | % Recovery | EPA 8260B | 09/29/2009 |
| Toluene - d8 (Surr) | 101 | | % Recovery | EPA 8260B | 09/29/2009 |
| 4-Bromofluorobenzene (Surr) | 98.5 | | % Recovery | EPA 8260B | 09/29/2009 |
| **TPH as Motor Oil** | **350** | 100 | ug/L | M EPA 8015 | 09/30/2009 |
| **TPH as Diesel (w/ Silica Gel)** | **88** | 50 | ug/L | M EPA 8015 | 09/30/2009 |
| (Note: Some hydrocarbons lower-boiling, some higher-boiling than Diesel.) | | | | | |
| **TPH as Jet Fuel** | **1200** | 50 | ug/L | M EPA 8015 | 09/30/2009 |
| (Note: Higher boiling hydrocarbons present, atypical for Jet Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | 113 | | % Recovery | M EPA 8015 | 09/30/2009 |
| Octacosane (Silica Gel Surr) | 105 | | % Recovery | M EPA 8015 | 09/30/2009 |

KIFF Analytical LLC

Report Number : 70204
Date : 10/06/2009

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

Sample : **MW-17** Matrix : Water Lab Number : 70204-17
Sample Date :09/24/2009

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 09/29/2009 |
| **Naphthalene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| 1,2-Dichloroethane-d4 (Surr) | 101 | | % Recovery | EPA 8260B | 09/29/2009 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 09/29/2009 |
| 4-Bromofluorobenzene (Surr) | 99.7 | | % Recovery | EPA 8260B | 09/29/2009 |
| **TPH as Motor Oil** | **< 100** | 100 | ug/L | M EPA 8015 | 10/02/2009 |
| **TPH as Diesel (w/ Silica Gel)** | **< 50** | 50 | ug/L | M EPA 8015 | 09/30/2009 |
| **TPH as Jet Fuel** | **< 50** | 50 | ug/L | M EPA 8015 | 10/02/2009 |
| Octacosane (Diesel Surrogate) | 108 | | % Recovery | M EPA 8015 | 10/02/2009 |
| Octacosane (Silica Gel Surr) | 99.3 | | % Recovery | M EPA 8015 | 09/30/2009 |

KIFF Analytical LLC

Report Number : 70204
Date : 10/06/2009

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

Sample : **NPORDMW-3** Matrix : Water Lab Number : 70204-18
Sample Date :09/24/2009

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 09/28/2009 |
| **Naphthalene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| 1,2-Dichloroethane-d4 (Surr) | 103 | | % Recovery | EPA 8260B | 09/28/2009 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 09/28/2009 |
| 4-Bromofluorobenzene (Surr) | 98.8 | | % Recovery | EPA 8260B | 09/28/2009 |
| **TPH as Motor Oil** | **< 100** | 100 | ug/L | M EPA 8015 | 09/30/2009 |
| **TPH as Diesel (w/ Silica Gel)** | **< 50** | 50 | ug/L | M EPA 8015 | 09/30/2009 |
| **TPH as Jet Fuel** | **< 50** | 50 | ug/L | M EPA 8015 | 09/30/2009 |
| Octacosane (Diesel Surrogate) | 115 | | % Recovery | M EPA 8015 | 09/30/2009 |
| Octacosane (Silica Gel Surr) | 102 | | % Recovery | M EPA 8015 | 09/30/2009 |

KIFF Analytical LLC

Report Number : 70204
Date : 10/06/2009

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

Sample : **NPORDMW-4** Matrix : Water Lab Number : 70204-19
Sample Date :09/24/2009

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Toluene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Ethylbenzene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Total Xylenes** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| **TPH as Gasoline** | **< 50** | 50 | ug/L | EPA 8260B | 09/29/2009 |
| **Naphthalene** | **< 0.50** | 0.50 | ug/L | EPA 8260B | 09/29/2009 |
| 1,2-Dichloroethane-d4 (Surr) | 99.3 | | % Recovery | EPA 8260B | 09/29/2009 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 09/29/2009 |
| 4-Bromofluorobenzene (Surr) | 99.2 | | % Recovery | EPA 8260B | 09/29/2009 |
| **TPH as Motor Oil** | **180** | 100 | ug/L | M EPA 8015 | 10/02/2009 |
| **TPH as Diesel (w/ Silica Gel)** | **200** | 50 | ug/L | M EPA 8015 | 10/05/2009 |
| (Note: Some hydrocarbons lower-boiling, some higher-boiling than Diesel.) | | | | | |
| **TPH as Jet Fuel** | **500** | 50 | ug/L | M EPA 8015 | 10/02/2009 |
| (Note: Higher boiling hydrocarbons present, atypical for Jet Fuel.) | | | | | |
| Octacosane (Diesel Surrogate) | 104 | | % Recovery | M EPA 8015 | 10/02/2009 |
| Octacosane (Silica Gel Surr) | 118 | | % Recovery | M EPA 8015 | 10/05/2009 |

Report Number : 70204

Date : 10/06/2009

**QC Report : Method Blank Data**

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

Project Number : **25-948218.1**

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| TPH as Diesel (w/ Silica Gel) | < 50 | 50 | ug/L | M EPA 8015 | 09/30/2009 |
| TPH as Jet Fuel | < 50 | 50 | ug/L | M EPA 8015 | 09/30/2009 |
| TPH as Motor Oil | < 100 | 100 | ug/L | M EPA 8015 | 09/30/2009 |
| Octacosane (Diesel Surrogate) | 114 | | % | M EPA 8015 | 09/30/2009 |
| Octacosane (Silica Gel Surr) | 114 | | % | M EPA 8015 | 09/30/2009 |
| TPH as Diesel (w/ Silica Gel) | < 50 | 50 | ug/L | M EPA 8015 | 09/30/2009 |
| TPH as Jet Fuel | < 50 | 50 | ug/L | M EPA 8015 | 09/30/2009 |
| TPH as Motor Oil | < 100 | 100 | ug/L | M EPA 8015 | 09/30/2009 |
| Octacosane (Diesel Surrogate) | 114 | | % | M EPA 8015 | 09/30/2009 |
| Octacosane (Silica Gel Surr) | 101 | | % | M EPA 8015 | 09/30/2009 |
| TPH as Diesel (w/ Silica Gel) | < 50 | 50 | ug/L | M EPA 8015 | 10/05/2009 |
| TPH as Jet Fuel | < 50 | 50 | ug/L | M EPA 8015 | 10/05/2009 |
| TPH as Motor Oil | < 100 | 100 | ug/L | M EPA 8015 | 10/05/2009 |
| Octacosane (Diesel Surrogate) | 96.0 | | % | M EPA 8015 | 10/05/2009 |
| Octacosane (Silica Gel Surr) | 94.0 | | % | M EPA 8015 | 10/05/2009 |
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| Methyl-t-butyl ether (MTBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 09/28/2009 |
| Naphthalene | < 0.50 | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| 1,2-Dichloroethane-d4 (Surr) | 101 | | % | EPA 8260B | 09/28/2009 |
| 4-Bromofluorobenzene (Surr) | 100 | | % | EPA 8260B | 09/28/2009 |
| Toluene - d8 (Surr) | 100 | | % | EPA 8260B | 09/28/2009 |

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| Methyl-t-butyl ether (MTBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 09/28/2009 |
| Naphthalene | < 0.50 | 0.50 | ug/L | EPA 8260B | 09/28/2009 |
| 1,2-Dichloroethane-d4 (Surr) | 98.6 | | % | EPA 8260B | 09/28/2009 |
| 4-Bromofluorobenzene (Surr) | 99.8 | | % | EPA 8260B | 09/28/2009 |
| Toluene - d8 (Surr) | 100 | | % | EPA 8260B | 09/28/2009 |



KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 70204

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Date : 10/06/2009

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

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 | 946 | 853 | ug/L | M EPA 8015 | 9/30/09 | 94.6 | 85.3 | 10.4 | 70-130 | 25 |
| TPH as Diesel | BLANK | <50 | 1000 | 1000 | 1080 | 1060 | ug/L | M EPA 8015 | 9/30/09 | 108 | 106 | 1.98 | 70-130 | 25 |
| Benzene | 70204-18 | <0.50 | 40.6 | 40.6 | 39.6 | 38.5 | ug/L | EPA 8260B | 9/28/09 | 97.5 | 94.8 | 2.80 | 70-130 | 25 |
| Methyl-t-butyl ether | 70204-18 | <0.50 | 40.6 | 40.6 | 35.5 | 35.4 | ug/L | EPA 8260B | 9/28/09 | 87.3 | 87.0 | 0.339 | 70-130 | 25 |
| Toluene | 70204-18 | <0.50 | 40.1 | 40.1 | 39.5 | 38.6 | ug/L | EPA 8260B | 9/28/09 | 98.4 | 96.1 | 2.33 | 70-130 | 25 |
| Benzene | 70210-02 | <0.50 | 40.6 | 40.6 | 38.9 | 38.1 | ug/L | EPA 8260B | 9/28/09 | 95.8 | 94.0 | 2.00 | 70-130 | 25 |
| Methyl-t-butyl ether | 70210-02 | <0.50 | 40.6 | 40.6 | 39.2 | 38.2 | ug/L | EPA 8260B | 9/28/09 | 96.5 | 93.9 | 2.64 | 70-130 | 25 |
| Toluene | 70210-02 | <0.50 | 40.1 | 40.1 | 38.6 | 38.0 | ug/L | EPA 8260B | 9/28/09 | 96.3 | 94.8 | 1.56 | 70-130 | 25 |
| TPH-D (Si Gel) | BLANK | <50 | 1000 | 1000 | 1010 | 885 | ug/L | M EPA 8015 | 9/30/09 | 101 | 88.5 | 13.0 | 70-130 | 25 |
| TPH as Diesel | BLANK | <50 | 1000 | 1000 | 1070 | 1030 | ug/L | M EPA 8015 | 9/30/09 | 107 | 103 | 3.73 | 70-130 | 25 |
| TPH-D (Si Gel) | BLANK | <50 | 1000 | 1000 | 976 | 972 | ug/L | M EPA 8015 | 10/5/09 | 97.6 | 97.2 | 0.488 | 70-130 | 25 |
| TPH as Diesel | BLANK | <50 | 1000 | 1000 | 1090 | 946 | ug/L | M EPA 8015 | 10/5/09 | 109 | 94.6 | 13.9 | 70-130 | 25 |



KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

**QC Report : Laboratory Control Sample (LCS)**

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

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 | 9/28/09 | 99.0 | 70-130 |
| Methyl-t-butyl ether | 40.7 | ug/L | EPA 8260B | 9/28/09 | 88.6 | 70-130 |
| Toluene | 40.1 | ug/L | EPA 8260B | 9/28/09 | 101 | 70-130 |
| Benzene | 40.2 | ug/L | EPA 8260B | 9/28/09 | 98.6 | 70-130 |
| Methyl-t-butyl ether | 40.8 | ug/L | EPA 8260B | 9/28/09 | 101 | 70-130 |
| Toluene | 40.2 | ug/L | EPA 8260B | 9/28/09 | 99.6 | 70-130 |



KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Global ID #: T06019775776

☐ Yes
☐ No

T0204

# Chain-of-Custody-Record

Direct Bill To:
Geoffrey Risse
Gettler-Ryan Inc.
3140 Gold Camp Dr.
Rancho Cordova, CA
95670

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: 3140 Gold Camp Dr., Suite 170, Rancho Cordova, CA 95670
Project Contact: (Name) Geoffrey Risse e-mail grisse@grinc.com
(Phone) 916-631-1300x12 (Fax) 916-631-1317

(Name) Geoffrey Risse
(Phone) 916-631-1300x12
Laboratory Name: Kiff Analytical
Laboratory Service Order:
Laboratory Service Code:
Samples Collected by: (Name) Jim Herron
Signature:

State Method: ☑ CA ☐ OR ☐ WA ☐ NW Series ☐ CO ☐ UT ☐ ID

| Sample I.D. | Number of Containers | Matrix S= Soil A=Air W=Water C=Charcoal | DATE/SAMPLE COLLECTION TIME | 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) | Remarks: EDF NEEDED | Lab Sample No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QA | 2 | W | 9/24/09 | | | | X | | | | | | 01 |
| MW-1 | 7 | W | 1000 | X | X | X | X | | | | | | 02 |
| MW-2 | | | 0940 | X | X | X | X | | | | | | 03 |
| MW-3 | | | 1310 | X | X | X | X | | | | | | 04 |
| MW-4 | | | 1400 | X | X | X | X | | | | | | 05 |
| MW-5 | | | 1045 | X | X | X | X | | | | | | 06 |
| MW-6 | | | 1315 | X | X | X | X | | | | | | 07 |
| MW-7 | | | 1230 | X | X | X | X | | | | | | 08 |
| MW-8 | | | 0950 | X | X | X | X | | | | | | 09 |
| MW-9 | | | 1255 | X | X | X | X | | | | | | 10 |
| MW-10 | | | 1135 | X | X | X | X | | | | | | 11 |
| MW-11 | | | 1210 | X | X | X | X | | | | | | 12 |
| MW-12 | | | 1138 | X | X | X | X | | | | | | 13 |
| MW-13 | ↓ | ↓ | 1345 | X | X | X | X | | | | | | 14 |

| Relinquished By (Signature) | Organization | Date/Time | Received By (Signature) | Organization | Date/Time | Iced (Y/N) |
|---|---|---|---|---|---|---|
| | Gettler-Ryan | 9/24/09 1700 | | | | |
| 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 | | 092509 1408 | |

Turn Around Time (Circle Choice)

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

1082

70204

# Chain-of-Custody-Record

Global ID #: T06019775776

☐ Yes
☐ No

Direct Bill To:
Geoffrey Risse
Gettler-Ryan Inc.
3140 Gold Camp Dr.
Rancho Cordova, CA
95670

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: 3140 Gold Camp Dr., Suite 170, Rancho Cordova, CA 95670
Project Contact: (Name) Geoffrey Risse e-mail grisse@grinc.com
(Phone) 916-631-1300x12 (Fax) 916-631-1317

(Name) Geoffrey Risse
(Phone) 916-631-1300x12
Laboratory Name: Kiff Analytical
Laboratory Service Order:
Laboratory Service Code:
Samples Collected by: (Name) Jim Herrod
Signature:

State Method: ☑ CA ☐ OR ☐ WA ☐ NW Series ☐ CO ☐ UT ☐ ID

| | Sample I.D. | Number of Containers | Matrix S= Soil A=Air W=Water C=Charcoal | DATE/SAMPLE COLLECTION TIME | 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) | Remarks: EDF NEEDED — Lab Sample No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-15 | 7 | W | 9/24/09 1055 | X | X | X | X | | | | | 15 |
| 1 | MW-14 | | | 1225 | X | X | X | X | | | | | 16 |
| | MW-17 | | | 1015 | X | X | X | X | | | | | 17 |
| 1 | NPORDMW-3 | | | 1135 | X | X | X | X | | | | | 18 |
| 1 | NPORDMW-4 | ↓ | ↓ | 1040 | X | X | X | X | | | | | 19 |

| Relinquished By (Signature) | Organization | Date/Time | Received By (Signature) | Organization | Date/Time | Iced (Y/N) |
|---|---|---|---|---|---|---|
| | Gettler-Ryan | 9/24/09 17W | | | | |
| 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 | | 092509 1408 | |

Turn Around Time (Circle Choice)

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



2 of 2

KIFF Analytical LLC

# SAMPLE RECEIPT CHECKLIST

RECEIVER: LJR Initials

SRG#: 70204 Date: 092509

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 5.2 Therm. ID# IR-5 Initial LJR Date/Time 092509/1816 ☐ 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: 092509 Time: 1832

## 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: -10(1 of 7) has time of 1225 on VOA label

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