February 18, 2013

Mrs. Susan Bull
Maryland Department of the Environment (MDE)
Oil Control Program
1800 Washington Boulevard
Baltimore, Maryland 21230-1719

Re: Request for Change in Well Sampling Techniques
Gasoline Fueling Station – Royal Farms Store No. 96
500 Mechanics Valley Road, North East, MD 21901
MDE OCP Case No. 2011-0729-CE
Closed Case No. 99-2595-CE
Facility ID 13226
AEC Project # 05-056RF096

Dear Mrs. Bull:

Advantage Environmental Consultants, LLC. (AEC) has prepared this letter to request a change in monitoring and recovery well sampling techniques for the above referenced site. The Final Corrective Action Plan (CAP) dated April 11, 2012 specified low-flow sampling procedures in accordance with USEPA Low-Flow Purging and Sampling of Groundwater Monitoring Well procedures (Bulletin No. QAD023). To date low-flow techniques have been employed once during the November 2012 sampling event. The remaining quarterly events used standard purge and bail techniques. AEC requests this modification be made based primarily on water quality results between the two techniques.

Prior to the pre-system start up sampling, which occurred in November 2012, standard sampling techniques were employed during the previous quarterly testing events. A comparison of the monitoring well water quality results for the November 2012 and the preceding quarterly events indicate a close correlation between the two sampling techniques. One exception is the results for MW-7, where the November 2012 results are significantly higher than the September 2012 results. When compared to the preceding quarterly events the results vary between elevated concentrations (September 2011 and March 2012) and low concentrations (June 2012 and September 2012). As a result no correlation can be made between the two techniques for this well.

A comparison of the recovery well water quality results for the November 2012 and the preceding quarterly events indicate a close correlation between the two

sampling techniques in one of the 13 wells. In six of the 13 wells the November 2012 results are significantly lower than the preceding sampling events using standard techniques. In five of the 13 wells there was not enough data for a comparison. In one of the 13 wells the November 2012 results were higher than the preceding quarterly events. The historical water quality results are summarized in the attached table.

Based on the comparison between the water quality results of the two techniques, AEC contends that switching back to standard techniques will not affect future data quality.

In addition, AEC has analyzed the cost difference between the low-flow and standard groundwater sampling techniques and determined that the low-flow technique labor costs are approximately 60% greater than the standard technique.

Your timely response to this request would be greatly appreciated. Please call the undersigned at (301) 776-0500 should you have any questions.

Sincerely,
Advantage Environmental Consultants, LLC

James Wolf
Project Manager

Jeffery S. Stein, P.G.
Principal

CC: T. Ruszin

Table 2 - Historical Monitoring/Recovery Well Groundwater Analytical Results
Gasoline Fueling Station – Royal Farms #96
500 Mechanics Valley Road, North East, MD 21901

Well No.	Date	B	T	E	X	Total BTEX	MTBE	Naphth	TPH GRO	TPH DRO
MW-1	6/8/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	7/26/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	8/4/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/15/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1R	12/15/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/15/2012	BDL	BDL	BDL	55	55	BDL	BDL	BDL	BDL
	6/21/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/6/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/16/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-2	6/8/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS
	7/26/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	8/4/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/15/2011	**31**	7.2	BDL	27.8	66	BDL	**12**	**12**	BDL
	12/15/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/15/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/21/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/6/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/16/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-3	6/8/2011	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	7/26/2011	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	8/4/2011	**730**	**2700**	**800**	4800	9030	BDL	**400**	**13**	**6.6**
	9/15/2011	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	12/15/2012	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	3/15/2012	**3700**	**8000**	660	2190	14550	BDL	**950**	**5.8**	**10**
	6/21/2012	**750**	**2100**	260	1900	5010	BDL	**150**	**5.3**	**2.7**
	9/6/2012	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/12/2012	Abandoned								
MW-4	8/4/2011	BDL	BDL	BDL	21.6	21.6	BDL	**18**	BDL	BDL
	9/15/2011	BDL	5.1	BDL	7.1	12.2	BDL	BDL	BDL	BDL
	12/15/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/15/2012	BDL	BDL	BDL	416.1	416.1	BDL	**9.7**	BDL	BDL
	6/21/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/6/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/15/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-5	8/4/2011	BDL	6.6	BDL	8.2	14.8	BDL	BDL	BDL	BDL
	9/15/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/15/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/15/2012	BDL	BDL	BDL	110	110	BDL	BDL	BDL	BDL
	6/21/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/6/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/15/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-6	8/4/2011	BDL	9	BDL	BDL	9	BDL	BDL	BDL	BDL
	9/15/2011	**9.3**	29	BDL	21.7	60	BDL	BDL	BDL	BDL
	12/15/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/15/2012	BDL	BDL	BDL	150	150	BDL	BDL	BDL	BDL
	6/21/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/6/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	**0.3**
	11/16/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	**0.21**
MW-7	8/4/2011	**530**	860	64	420	1874	16	**27**	**1.8**	**0.7**
	9/15/2011	**7200**	**12000**	**1100**	6500	26800	BDL	**310**	**15**	**2.4**
	12/15/2011	**740**	**1100**	83	370	2293	BDL	**13**	**0.8**	BDL
	3/15/2012	**1000**	**2000**	170	**120500**	123670	BDL	**35**	**1.6**	**1.5**
	6/21/2012	**200**	370	24	155	749	BDL	**7.8**	**0.8**	BDL
	9/6/2012	**4.7J**	BDL	BDL	BDL	4.7	BDL	BDL	BDL	BDL
	11/16/2012	**714**	5950	467	5200	12331	BDL	129J	**13.3**	**2.49**
MW-8	8/4/2011	**5.2**	12	BDL	7	24.2	BDL	BDL	BDL	BDL
	9/15/2011	**11**	11	6.2	44	72.2	BDL	**26**	BDL	BDL
	12/15/2011	**18**	BDL	BDL	6.9	24.9	BDL	BDL	BDL	BDL
	3/15/2012	**28**	5.2	BDL	2300	2333.2	BDL	BDL	BDL	BDL
	6/21/2012	**6.2**	BDL	BDL	BDL	6.2	BDL	BDL	BDL	BDL
	9/6/2012	**33.2**	BDL	BDL	BDL	33.2	BDL	BDL	BDL	**0.27**
	11/16/2012	**3.4J**	BDL	BDL	BDL	3.4J	BDL	BDL	BDL	**0.20**

Well No.	Date	B	T	E	X	Total BTEX	MTBE	Naphth	TPH GRO	TPH DRO
MW-9	12/15/2011	**270**	5.4	BDL	70	345.4	BDL	BDL	BDL	BDL
	3/15/2012	**90**	BDL	BDL	4700	4790	**25**	BDL	BDL	BDL
	6/21/2012	**77**	BDL	BDL	26	103	**26**	**6.3**	BDL	BDL
	9/6/2012	**47.5**	BDL	BDL	3.9J	51.4	14.7	BDL	**0.219**	**2.82**
	11/16/2012	**2.6J**	BDL	BDL	BDL	2.6J	9.2	BDL	BDL	**1.60**
MW-10	12/15/2011	**9.2**	BDL	BDL	BDL	9.2	BDL	BDL	BDL	BDL
	3/15/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/21/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/6/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/15/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-11	12/15/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/15/2012	BDL	BDL	BDL	2500	2500	BDL	BDL	BDL	BDL
	6/21/2012	**32**	BDL	BDL	11	43	BDL	BDL	BDL	BDL
	9/6/2012	**19**	BDL	BDL	2.9J	21.9	BDL	BDL	BDL	BDL
	11/16/2012	**25.9**	BDL	BDL	3.1J	29	BDL	BDL	BDL	BDL
MW-12	12/15/2011	**110**	BDL	BDL	70	180	BDL	BDL	BDL	BDL
	3/15/2012	BDL	BDL	BDL	BDL	BDL	9	BDL	BDL	BDL
	6/21/2012	BDL	BDL	BDL	BDL	BDL	19	BDL	BDL	BDL
	9/6/2012	BDL	BDL	BDL	BDL	BDL	4.9J	BDL	BDL	**0.21**
	11/16/2012	BDL	BDL	BDL	BDL	BDL	3.8J	BDL	BDL	BDL
MW-13	12/15/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/15/2012	BDL	11	BDL	380	391	BDL	BDL	BDL	BDL
	6/21/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/6/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/15/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-14	12/15/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/15/2012	BDL	BDL	BDL	66	66	BDL	BDL	BDL	BDL
	6/21/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/6/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/15/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-15	12/15/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/15/2012	BDL	BDL	BDL	90	90	BDL	BDL	BDL	BDL
	6/21/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/6/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/16/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-10-D	11/15/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-12-D	11/15/2012	BDL	BDL	BDL	BDL	BDL	2.6J	BDL	BDL	**0.25**
MW-13-D	11/15/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
RW-1	8/4/2011	**260**	700	240	1360	2560	BDL	**250**	**5.3**	**2.1**
	9/15/2011	**2600**	**9400**	**4100**	**24200**	40300	BDL	**2600**	**36**	**17**
	12/15/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/15/2012	**660**	**2700**	560	**771400**	775320	BDL	**2500**	**20**	**7**
	11/19/2012	**317**	**1480**	196	1540	3533	BDL	**57.1**	**5.42**	**3.65**
RW-2	8/4/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/15/2011	**17300**	**30000**	**3800**	**17400**	68500	BDL	**3500**	**37**	**18**
	12/15/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/15/2012	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/20/2012	**162**	972	165	2113	3412	BDL	**88.5**	**5.75**	**1.01**
RW-3	8/4/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/15/2011	**640**	**2300**	210	4200	7350	BDL	**450**	**14**	**12**
	12/15/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/15/2012	**93**	830	260	**260830**	262013	BDL	**870**	**9.0**	**6.3**
	11/20/2012	**2.7J**	15.2	2.5J	**30**	50.4	BDL	BDL	**0.183**	BDL
RW-4	8/4/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/15/2011	**15400**	**25000**	**3300**	**15800**	59500	BDL	**2700**	**42**	**19**
	12/15/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/15/2012	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/20/2012	**13100**	**29500**	2140	15520	60260	BDL	**558J**	**67.2**	**9.12**
RW-5	8/4/2011	**113**	170	130	1140	1553	BDL	310	**2.6**	**1.6**
	9/15/2011	**190**	**2000**	370	1930	4490	BDL	**300**	**9.6**	**3.0**
	12/15/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS

Well No.	Date	B	T	E	X	Total BTEX	MTBE	Naphth	TPH GRO	TPH DRO
	3/15/2012	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/19/2012	**352**	BDL	97.3	BDL	449.3	BDL	**10.1J**	**0.837**	**0.49**
RW-6	8/4/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/15/2011	**5800**	**13000**	**1800**	**13200**	33800	BDL	**2800**	**26**	**7.3**
	12/15/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/15/2012	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/20/2012	**332**	540	70.3	1166	2108.3	BDL	**101**	**4.98**	**2.31**
RW-7	12/15/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/15/2012	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/20/2012	**5.2**	20.3	BDL	13	38.5	BDL	BDL	BDL	BDL
RW-8	12/15/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/15/2012	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/19/2012	**2460**	**5990**	343	1895	10688	BDL	BDL	**12.8**	**1.94**
RW-9	12/15/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/15/2012	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/19/2012	**74.5J**	500J	138J	1629J	2341.5J	BDL	**99.1J**	**2.88**	**1.94**
RW-10	12/15/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/15/2012	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/20/2012	**965**	**3200**	467	6200	10832	BDL	**157**	**15.3**	**5.05**
RW-11	12/15/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/15/2012	**4200**	**7200**	**770**	2600	14770	BDL	**200**	**7.6**	**6.5**
	11/20/2012	**5930**	**19100**	**1250**	9290	35570	BDL	**409J**	**37.9**	**4.71**
RW-12	12/15/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/15/2012	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/19/2012	**184**	838	47.9	976	2045.9	BDL	**26.3**	**2.35**	**1.27**
RW-13	12/15/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/15/2012	**220**	**1400**	250	**191000**	192870	BDL	**95**	**3.7**	**2.5**
	11/20/2012	**497**	**2310**	237	**1730**	4774	BDL	**67.6J**	**6.93**	**1.26**
TP-1	6/8/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/26/2011	**13**	27	47	610	697	BDL	**110**	**3.1**	**1.9**
TP-1*	12/15/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/15/2012	BDL	BDL	BDL	700	700	BDL	BDL	BDL	BDL
	6/21/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/6/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	**0.5**
	11/16/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	**0.43**
TP-2	6/8/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/26/2011	**18**	750	**700**	3166	4634	BDL	**2800**	**19**	**5.6**
TP-2*	12/15/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/15/2012	BDL	BDL	BDL	42	42	BDL	BDL	BDL	BDL
	6/21/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/6/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	**0.62**
	11/16/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	**0.45**
TP-3	12/15/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/15/2012	BDL	BDL	BDL	63	63	BDL	BDL	BDL	BDL
	6/21/2012	**5**	5.7	BDL	11	21.7	BDL	BDL	BDL	BDL
	9/6/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	**0.5**
	11/19/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
TP-4	12/15/2011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	3/15/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	6/21/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	9/6/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	**0.61**
	11/19/2012	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	**0.30**
Type I and II Aquifers		**5**	**1000**	**700**	**10000**	**NRS**	**20**	**0.65**	**0.047**	**0.047**

Data collected prior to the detection of the release (June 2011) has been omitted

TPH GRO and DRO results in parts per million or mg/l

BTEX and MTBE results in parts per billion or ug/l

BDL = Below Detection Limits

B = Benzene; T = Toluene; E = Ethylbenzene; X = Xylene; MTBE = Methyl-tert-butyl-ether

TPH GRO = Total Petroleum Hydrocarbons Gasoline Range Organics; TPH DRO = Total Petroleum Hydrocarbons Diesel Range Organics

NS = Not Sampled NA = Not Accessible LPH = Not sampled due to presence of Liquid Petroleum Hydrocarbon

Some compounds may have been detected but are not tabulated on this spreadsheet.

See laboratory analytical results reports for full results.

J Denotes Estimated Value

MDE Standards (Generic Numeric Cleanup Standards for Groundwater and Soil - Interim Final Guidance Update No. 2.1 - June 2008)

NRS = No Regulatory Standard

*New locations for TP-1 and TP-2