APPENDIX M

BUILDING 76 – SOIL SAMPLE LABORATORY ANALYTICAL REPORTS

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
VELAP ID 460040

Report revised. Previous report ID 8043008 06 29 18 1136.

29 June 2018

Nancy Love
Chesapeake GeoSciences, Inc.
5405 Twin Knolls Rd, Suite 1
Columbia, MD 21045
RE: ARMED FORCES RETIREMENT HOME

Enclosed are the results of analyses for samples received by the laboratory on 04/30/18 16:00.

A more detailed report format is available upon request, which lists the accreditation status for all analytical methods performed.

Please visit our website at www.mdspectral.com for a complete listing of our accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Rabecka Koons
Quality Assurance Officer

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/29/18 13:04

Report revised. Previous report ID 8043008 06 29 18 1136.

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-76-01 (SS)		8043008-01	Soil	04/27/18 10:35	04/30/18 16:00
SB-76-01 (8'-TOP)		8043008-02	Soil	04/27/18 10:45	04/30/18 16:00
SB-76-01 (9')		8043008-03	Soil	04/27/18 10:50	04/30/18 16:00
SB-76-01 (13'-BTM)		8043008-04	Soil	04/27/18 11:30	04/30/18 16:00
SB-76-02 (7.5'-TOP))		8043008-05	Soil	04/27/18 13:05	04/30/18 16:00
SB-76-02 (10')		8043008-06	Soil	04/27/18 12:55	04/30/18 16:00
SB-76-02 (14'-BTM)		8043008-07	Soil	04/27/18 13:15	04/30/18 16:00
SB-76-03 (SS)		8043008-08	Soil	04/27/18 14:25	04/30/18 16:00
SB-76-03 (1.5'-TOP)		8043008-09	Soil	04/27/18 14:55	04/30/18 16:00
SB-76-03 (3')		8043008-10	Soil	04/27/18 15:05	04/30/18 16:00
SB-76-03 (18'-btm)		8043008-11	Soil	04/27/18 16:45	04/30/18 16:00
SB-76-D1		8043008-12	Soil	04/27/18 00:00	04/30/18 16:00

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Rabecka Koons, Quality Assurance Officer

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Analytical Results

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Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/29/18 13:04

Report revised. Previous report ID 8043008 06 29 18 1136.

SB-76-01 (SS)

8043008-01 (Soil)
Sample Date: 04/27/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
SEMIVOLATILE ORGANICS BY EPA METHOD 8270D (GC/MS)									
Acenaphthene	ND		ug/kg dry	313	125	1	05/07/18	05/08/18 14:44	WB
Acenaphthylene	ND		ug/kg dry	313	125	1	05/07/18	05/08/18 14:44	WB
Anthracene	ND		ug/kg dry	313	125	1	05/07/18	05/08/18 14:44	WB
Benzo[a]anthracene	ND		ug/kg dry	313	125	1	05/07/18	05/08/18 14:44	WB
Benzo[b]fluoranthene	ND		ug/kg dry	313	125	1	05/07/18	05/08/18 14:44	WB
Benzo[k]fluoranthene	ND		ug/kg dry	313	125	1	05/07/18	05/08/18 14:44	WB
Benzo[ghi]perylene	ND		ug/kg dry	313	125	1	05/07/18	05/08/18 14:44	WB
Benzo[a]pyrene	ND		ug/kg dry	313	125	1	05/07/18	05/08/18 14:44	WB
Chrysene	ND		ug/kg dry	313	125	1	05/07/18	05/08/18 14:44	WB
Dibenzo[a,h]anthracene	ND		ug/kg dry	313	125	1	05/07/18	05/08/18 14:44	WB
Fluoranthene	ND		ug/kg dry	313	125	1	05/07/18	05/08/18 14:44	WB
Fluorene	ND		ug/kg dry	313	125	1	05/07/18	05/08/18 14:44	WB
Indeno[1,2,3-cd]pyrene	ND		ug/kg dry	313	125	1	05/07/18	05/08/18 14:44	WB
2-Methylnaphthalene	ND		ug/kg dry	313	125	1	05/07/18	05/08/18 14:44	WB
Naphthalene	ND		ug/kg dry	313	125	1	05/07/18	05/08/18 14:44	WB
Phenanthrene	ND		ug/kg dry	313	125	1	05/07/18	05/08/18 14:44	WB
Pyrene	ND		ug/kg dry	313	125	1	05/07/18	05/08/18 14:44	WB
Surrogate: 2-Fluorophenol			*21-110*	*64 %*			*05/07/18*	*05/08/18 14:44*	
Surrogate: Phenol-d5			*10-110*	*66 %*			*05/07/18*	*05/08/18 14:44*	
Surrogate: Nitrobenzene-d5			*35-114*	*71 %*			*05/07/18*	*05/08/18 14:44*	
Surrogate: 2,4,6-Tribromophenol			*10-123*	*69 %*			*05/07/18*	*05/08/18 14:44*	
Surrogate: 2-Fluorobiphenyl			*43-116*	*62 %*			*05/07/18*	*05/08/18 14:44*	
Surrogate: Terphenyl-d14			*33-141*	*78 %*			*05/07/18*	*05/08/18 14:44*	
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	ND		mg/kg dry	10.0	10.0	1	05/03/18	05/08/18 05:17	SJA
Surrogate: o-Terphenyl			*70-130*	*82 %*			*05/03/18*	*05/08/18 05:17*	

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

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Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/29/18 13:04

Report revised. Previous report ID 8043008 06 29 18 1136.

SB-76-01 (SS)

8043008-01 (Soil)
Sample Date: 04/27/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	ND		mg/kg dry	10	10	1	05/03/18	05/08/18 04:57	SJA
Surrogate: o-Terphenyl			*70-130*	*82 %*	*05/03/18*		*05/08/18 04:57*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**80**		%			1	05/04/18	05/07/18 09:37	GM
POLYCHLORINATED BIPHENYLS BY EPA 3540/8082 (GC/ECD)									
Aroclor-1016	ND		ug/kg	83.0	83.0	1	05/01/18	05/02/18 15:01	SJA
Aroclor-1221	ND		ug/kg	170	170	1	05/01/18	05/02/18 15:01	SJA
Aroclor-1232	ND		ug/kg	83.0	83.0	1	05/01/18	05/02/18 15:01	SJA
Aroclor-1242	ND		ug/kg	83.0	83.0	1	05/01/18	05/02/18 15:01	SJA
Aroclor-1248	ND		ug/kg	83.0	83.0	1	05/01/18	05/02/18 15:01	SJA
Aroclor-1254	ND		ug/kg	83.0	83.0	1	05/01/18	05/02/18 15:01	SJA
Aroclor-1260	ND		ug/kg	83.0	83.0	1	05/01/18	05/02/18 15:01	SJA
Aroclor-1262	ND		ug/kg	83.0	83.0	1	05/01/18	05/02/18 15:01	SJA
Aroclor-1268	ND		ug/kg	83.0	83.0	1	05/01/18	05/02/18 15:01	SJA
Surrogate: Tetrachloro-m-xylene			*40-150*	*71 %*	*05/01/18*		*05/02/18 15:01*		
Surrogate: Decachlorobiphenyl			*40-150*	*76 %*	*05/01/18*		*05/02/18 15:01*		

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Analytical Results

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Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/29/18 13:04

Report revised. Previous report ID 8043008 06 29 18 1136.

SB-76-01 (8'-TOP)

8043008-02 (Soil)
Sample Date: 04/27/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	**846**		mg/kg dry	51.9	51.9	5	05/03/18	05/08/18 05:43	SJA
Surrogate: o-Terphenyl			*70-130*	*85 %*	*05/03/18*		*05/08/18 05:43*		
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	**628**		mg/kg dry	52	52	5	05/03/18	05/08/18 05:23	SJA
Surrogate: o-Terphenyl			*70-130*	*85 %*	*05/03/18*		*05/08/18 05:23*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**77**		%			1	05/04/18	05/07/18 09:37	GM

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Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/29/18 13:04

Report revised. Previous report ID 8043008 06 29 18 1136.

SB-76-01 (9')

8043008-03 (Soil)
Sample Date: 04/27/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	**4410**		mg/kg dry	229	229	20	05/03/18	05/08/18 06:10	SJA
Surrogate: o-Terphenyl			*70-130*	*107 %*	*05/03/18*		*05/08/18 06:10*		
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	**2240**		mg/kg dry	229	229	20	05/03/18	05/08/18 05:50	SJA
Surrogate: o-Terphenyl			*70-130*	*107 %*	*05/03/18*		*05/08/18 05:50*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**70**		%			1	05/04/18	05/07/18 09:37	GM
Wet Chemistry Performed at Enviro-Chem									
% Solids	**81.5**		%	1.00	1.00	1	05/01/18	05/01/18 21:15	SES
Metals EPA 6020 Performed at Enviro-Chem									
Arsenic	**3.34**		mg/kg dry	0.481	0.481	2	05/02/18	05/02/18 12:13	MAP
Barium	**166**		mg/kg dry	0.481	0.481	2	05/02/18	05/02/18 12:13	MAP
Cadmium	ND		mg/kg dry	0.481	0.481	2	05/02/18	05/02/18 12:13	MAP
Chromium	**30.6**		mg/kg dry	0.481	0.481	2	05/02/18	05/02/18 12:13	MAP
Lead	**14.3**		mg/kg dry	0.481	0.481	2	05/02/18	05/02/18 12:13	MAP
Mercury	ND		mg/kg dry	0.0962	0.0962	2	05/02/18	05/02/18 12:13	MAP
Selenium	**2.21**		mg/kg dry	0.481	0.481	2	05/02/18	05/02/18 12:13	MAP
Silver	ND		mg/kg dry	0.481	0.481	2	05/02/18	05/02/18 12:13	MAP

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/29/18 13:04

Report revised. Previous report ID 8043008 06 29 18 1136.

SB-76-01 (13'-BTM)

8043008-04 (Soil)
Sample Date: 04/27/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	ND		mg/kg dry	9.9	9.9	1	05/03/18	05/08/18 06:36	SJA
Surrogate: o-Terphenyl			*70-130*	*81 %*	*05/03/18*		*05/08/18 06:36*		
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	ND		mg/kg dry	10	10	1	05/03/18	05/08/18 06:16	SJA
Surrogate: o-Terphenyl			*70-130*	*81 %*	*05/03/18*		*05/08/18 06:16*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**81**		%			1	05/04/18	05/07/18 09:37	GM

Rebecka Koons

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Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/29/18 13:04

Report revised. Previous report ID 8043008 06 29 18 1136.

SB-76-02 (7.5'-TOP))

8043008-05 (Soil)
Sample Date: 04/27/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	ND		mg/kg dry	10.0	10.0	1	05/03/18	05/08/18 07:02	SJA
Surrogate: o-Terphenyl			*70-130*	*72 %*	*05/03/18*		*05/08/18 07:02*		
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	ND		mg/kg dry	10	10	1	05/03/18	05/08/18 06:42	SJA
Surrogate: o-Terphenyl			*70-130*	*72 %*	*05/03/18*		*05/08/18 06:42*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**80**		%			1	05/04/18	05/07/18 09:37	GM

Rebecka Koons

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Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/29/18 13:04

Report revised. Previous report ID 8043008 06 29 18 1136.

SB-76-02 (10')

8043008-06 (Soil)
Sample Date: 04/27/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	**1420**		mg/kg dry	97.6	97.6	10	05/03/18	05/08/18 07:29	SJA
Surrogate: o-Terphenyl			*70-130*	*98 %*	*05/03/18*		*05/08/18 07:29*		
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	**664**		mg/kg dry	98	98	10	05/03/18	05/08/18 07:09	SJA
Surrogate: o-Terphenyl			*70-130*	*98 %*	*05/03/18*		*05/08/18 07:09*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**82**		%			1	05/04/18	05/07/18 09:37	GM
Wet Chemistry Performed at Enviro-Chem									
% Solids	**79.2**		%	1.00	1.00	1	05/01/18	05/01/18 21:15	SES
Metals EPA 6020 Performed at Enviro-Chem									
Arsenic	**2.46**		mg/kg dry	0.468	0.468	2	05/02/18	05/02/18 12:17	MAP
Barium	**32.5**		mg/kg dry	0.468	0.468	2	05/02/18	05/02/18 12:17	MAP
Cadmium	ND		mg/kg dry	0.468	0.468	2	05/02/18	05/02/18 12:17	MAP
Chromium	**21.4**		mg/kg dry	0.468	0.468	2	05/02/18	05/02/18 12:17	MAP
Lead	**8.84**		mg/kg dry	0.468	0.468	2	05/02/18	05/02/18 12:17	MAP
Mercury	ND		mg/kg dry	0.0935	0.0935	2	05/02/18	05/02/18 12:17	MAP
Selenium	**2.69**		mg/kg dry	0.468	0.468	2	05/02/18	05/02/18 12:17	MAP
Silver	ND		mg/kg dry	0.468	0.468	2	05/02/18	05/02/18 12:17	MAP

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/29/18 13:04

Report revised. Previous report ID 8043008 06 29 18 1136.

SB-76-02 (14'-BTM)

8043008-07 (Soil)
Sample Date: 04/27/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	**11.4**		mg/kg dry	10.1	10.1	1	05/03/18	05/08/18 07:55	SJA
Surrogate: o-Terphenyl			*70-130*	*90 %*		*05/03/18*		*05/08/18 07:55*	
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	**11**		mg/kg dry	10	10	1	05/03/18	05/08/18 07:35	SJA
Surrogate: o-Terphenyl			*70-130*	*90 %*		*05/03/18*		*05/08/18 07:35*	
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**79**		%			1	05/04/18	05/07/18 09:37	GM

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Project Manager: Nancy Love

Reported:
06/29/18 13:04

Report revised. Previous report ID 8043008 06 29 18 1136.

SB-76-03 (SS)

8043008-08 (Soil)
Sample Date: 04/27/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
SEMIVOLATILE ORGANICS BY EPA METHOD 8270D (GC/MS)									
Acenaphthene	ND		ug/kg dry	298	119	1	05/07/18	05/08/18 15:28	WB
Acenaphthylene	ND		ug/kg dry	298	119	1	05/07/18	05/08/18 15:28	WB
Anthracene	ND		ug/kg dry	298	119	1	05/07/18	05/08/18 15:28	WB
Benzo[a]anthracene	ND		ug/kg dry	298	119	1	05/07/18	05/08/18 15:28	WB
Benzo[b]fluoranthene	ND		ug/kg dry	298	119	1	05/07/18	05/08/18 15:28	WB
Benzo[k]fluoranthene	ND		ug/kg dry	298	119	1	05/07/18	05/08/18 15:28	WB
Benzo[ghi]perylene	ND		ug/kg dry	298	119	1	05/07/18	05/08/18 15:28	WB
Benzo[a]pyrene	ND		ug/kg dry	298	119	1	05/07/18	05/08/18 15:28	WB
Chrysene	ND		ug/kg dry	298	119	1	05/07/18	05/08/18 15:28	WB
Dibenzo[a,h]anthracene	ND		ug/kg dry	298	119	1	05/07/18	05/08/18 15:28	WB
Fluoranthene	ND		ug/kg dry	298	119	1	05/07/18	05/08/18 15:28	WB
Fluorene	ND		ug/kg dry	298	119	1	05/07/18	05/08/18 15:28	WB
Indeno[1,2,3-cd]pyrene	ND		ug/kg dry	298	119	1	05/07/18	05/08/18 15:28	WB
2-Methylnaphthalene	ND		ug/kg dry	298	119	1	05/07/18	05/08/18 15:28	WB
Naphthalene	ND		ug/kg dry	298	119	1	05/07/18	05/08/18 15:28	WB
Phenanthrene	ND		ug/kg dry	298	119	1	05/07/18	05/08/18 15:28	WB
Pyrene	ND		ug/kg dry	298	119	1	05/07/18	05/08/18 15:28	WB
Surrogate: 2-Fluorophenol			*21-110*	*77 %*			*05/07/18*	*05/08/18 15:28*	
Surrogate: Phenol-d5			*10-110*	*79 %*			*05/07/18*	*05/08/18 15:28*	
Surrogate: Nitrobenzene-d5			*35-114*	*86 %*			*05/07/18*	*05/08/18 15:28*	
Surrogate: 2,4,6-Tribromophenol			*10-123*	*78 %*			*05/07/18*	*05/08/18 15:28*	
Surrogate: 2-Fluorobiphenyl			*43-116*	*77 %*			*05/07/18*	*05/08/18 15:28*	
Surrogate: Terphenyl-d14			*33-141*	*80 %*			*05/07/18*	*05/08/18 15:28*	
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	ND		mg/kg dry	9.5	9.5	1	05/03/18	05/08/18 08:22	SJA
Surrogate: o-Terphenyl			*70-130*	*93 %*			*05/03/18*	*05/08/18 08:22*	

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/29/18 13:04

Report revised. Previous report ID 8043008 06 29 18 1136.

SB-76-03 (SS)

8043008-08 (Soil)
Sample Date: 04/27/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	ND		mg/kg dry	10	10	1	05/03/18	05/08/18 08:02	SJA
Surrogate: o-Terphenyl			*70-130*	*93 %*	*05/03/18*		*05/08/18 08:02*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**84**		%			1	05/04/18	05/07/18 09:37	GM
POLYCHLORINATED BIPHENYLS BY EPA 3540/8082 (GC/ECD)									
Aroclor-1016	ND		ug/kg	83.0	83.0	1	05/01/18	05/02/18 15:28	SJA
Aroclor-1221	ND		ug/kg	170	170	1	05/01/18	05/02/18 15:28	SJA
Aroclor-1232	ND		ug/kg	83.0	83.0	1	05/01/18	05/02/18 15:28	SJA
Aroclor-1242	ND		ug/kg	83.0	83.0	1	05/01/18	05/02/18 15:28	SJA
Aroclor-1248	ND		ug/kg	83.0	83.0	1	05/01/18	05/02/18 15:28	SJA
Aroclor-1254	ND		ug/kg	83.0	83.0	1	05/01/18	05/02/18 15:28	SJA
Aroclor-1260	ND		ug/kg	83.0	83.0	1	05/01/18	05/02/18 15:28	SJA
Aroclor-1262	ND		ug/kg	83.0	83.0	1	05/01/18	05/02/18 15:28	SJA
Aroclor-1268	ND		ug/kg	83.0	83.0	1	05/01/18	05/02/18 15:28	SJA
Surrogate: Tetrachloro-m-xylene			*40-150*	*70 %*	*05/01/18*		*05/02/18 15:28*		
Surrogate: Decachlorobiphenyl			*40-150*	*82 %*	*05/01/18*		*05/02/18 15:28*		

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/29/18 13:04

Report revised. Previous report ID 8043008 06 29 18 1136.

SB-76-03 (1.5'-TOP)

8043008-09 (Soil)
Sample Date: 04/27/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	ND		mg/kg dry	9.0	9.0	1	05/03/18	05/08/18 08:48	SJA
Surrogate: o-Terphenyl			*70-130*	*100 %*	*05/03/18*		*05/08/18 08:48*		
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	ND		mg/kg dry	9	9	1	05/03/18	05/08/18 08:28	SJA
Surrogate: o-Terphenyl			*70-130*	*100 %*	*05/03/18*		*05/08/18 08:28*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**89**		%			1	05/04/18	05/07/18 09:37	GM

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/29/18 13:04

Report revised. Previous report ID 8043008 06 29 18 1136.

SB-76-03 (3')

8043008-10 (Soil)
Sample Date: 04/27/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	**478**		mg/kg dry	29.3	29.3	3	05/03/18	05/08/18 09:14	SJA
Surrogate: o-Terphenyl			*70-130*	*101 %*	*05/03/18*		*05/08/18 09:14*		
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	**212**		mg/kg dry	29	29	3	05/03/18	05/08/18 08:54	SJA
Surrogate: o-Terphenyl			*70-130*	*101 %*	*05/03/18*		*05/08/18 08:54*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**82**		%			1	05/04/18	05/07/18 09:37	GM
Wet Chemistry Performed at Enviro-Chem									
% Solids	**82.0**		%	1.00	1.00	1	05/01/18	05/01/18 21:15	SES
Metals EPA 6020 Performed at Enviro-Chem									
Arsenic	**7.80**		mg/kg dry	0.421	0.421	2	05/02/18	05/02/18 12:21	MAP
Barium	**76.8**		mg/kg dry	0.421	0.421	2	05/02/18	05/02/18 12:21	MAP
Cadmium	ND		mg/kg dry	0.421	0.421	2	05/02/18	05/02/18 12:21	MAP
Chromium	**24.0**		mg/kg dry	0.421	0.421	2	05/02/18	05/02/18 12:21	MAP
Lead	**8.40**		mg/kg dry	0.421	0.421	2	05/02/18	05/02/18 12:21	MAP
Mercury	ND		mg/kg dry	0.0841	0.0841	2	05/02/18	05/02/18 12:21	MAP
Selenium	**2.91**		mg/kg dry	0.421	0.421	2	05/02/18	05/02/18 12:21	MAP
Silver	ND		mg/kg dry	0.421	0.421	2	05/02/18	05/02/18 12:21	MAP

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
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www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/29/18 13:04

Report revised. Previous report ID 8043008 06 29 18 1136.

SB-76-03 (18'-btm)

8043008-11 (Soil)
Sample Date: 04/27/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	ND		mg/kg dry	9.6	9.6	1	05/03/18	05/08/18 10:07	SJA
Surrogate: o-Terphenyl			*70-130*	*91 %*	*05/03/18*		*05/08/18 10:07*		
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	ND		mg/kg dry	10	10	1	05/03/18	05/08/18 09:47	SJA
Surrogate: o-Terphenyl			*70-130*	*91 %*	*05/03/18*		*05/08/18 09:47*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**83**		%			1	05/04/18	05/07/18 09:37	GM

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/29/18 13:04

Report revised. Previous report ID 8043008 06 29 18 1136.

SB-76-D1

8043008-12 (Soil)
Sample Date: 04/27/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	**324**		mg/kg dry	19.8	19.8	2	05/03/18	05/08/18 10:33	SJA
Surrogate: o-Terphenyl			*70-130*	*98 %*	*05/03/18*		*05/08/18 10:33*		
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	**146**		mg/kg dry	20	20	2	05/03/18	05/08/18 10:13	SJA
Surrogate: o-Terphenyl			*70-130*	*98 %*	*05/03/18*		*05/08/18 10:13*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**81**		%			1	05/04/18	05/07/18 09:37	GM

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111

Project Manager: Nancy Love

Reported:
06/29/18 13:04

Report revised. Previous report ID 8043008 06 29 18 1136.

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

CHAIN-OF-CUSTODY RECORD

Company Name: Chesapeake GeoSciences, Inc.	Project Manager: Nancy Love
Project Name: Armed Forces Retirement Home	Project ID: CG-17-1111
Sampler(s): Meg Staines	P.O. Number: CG171111MS

Maryland Spectral Services, Inc.
1500 Caton Center Drive, Suite G
Baltimore, MD 21227
410–247–7600 • Fax 410–247–7602
labman@mdspectral.com

Matrix Codes: NW (nonpotable water)
PW (potable water)

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	VOCs EPA 8260	PAHs EPA 8270	TPH-GRO EPA 8015M	TPH-DRO EPA 8015M	TPH-ORO EPA 8015M	RCRA 8 Metals EPA 6020	PCBs EPA 8082	TPH-C7-12 EPA 8015M			Preservative: 1+1 HCL, H_2SO_4, Methanol, $Na_2S_2O_3$, $NaHCO_3$	Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank	MSS Lab ID
SB-76-01 (SS)	4/27/18	10:35		X		1		X		X	X		X				4°C		8043008-01
SB-76-01 (8'-top)		10:45		X		1				X	X								-02
SB-76-01 (9')		10:50		X		2				X	X	X							-03
SB-76-01 (13'-btm)		11:30		X		1				X	X								-04
SB-76-02 (7.5'-top)		13:05		X		1				X	X								-05
SB-76-02 (10')		12:55		X		2				X	X	X							-06
SB-76-02 (14'-btm)		13:15		X		1				X	X								-07
SB-76-03 (SS)		14:25		X		1		X		X	X		X						-08
SB-76-03 (1.5'-top)		14:55		X		1				X	X								-09
SB-76-03 (3')	↓	15:05		X		2				X	X	X					↓		-10

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Meg Staines	04/29/18 22:00	Nancy Love	Nancy Love	4/30/18 15:20	Mark Colkin-Avila
(Printed) Meg Staines		(Printed) Nancy Love	(Printed) Nancy Love		(Printed) Mark Colkin-Avila
Relinquished by: (Signature)	Date/Time	Received by Lab: (Signature)	Turn Around Time:	Lab Use:	
	16:00 04/30/18	Cory Kaas	☐ Normal (7 day) ☐ 5 day ☐ 4 day ☐ 3 day ☐ Rush (2 day) ☐ Next Day ☐ Other: _____ ☐ Specific Due Date: _____	Temp: 2.0 °C ☐ Received on Ice ☐ Received same day ☐ Preservation Appropriate	
(Printed)		(Printed) Cory Kaas		Sample Disposal: ☐ Return to Client ☐ Disposal by lab ☐ Archive for _____ days	

Delivery Method:
- ☐ Courier
- ☐ Client
- ☐ UPS
- ☐ FedEx
- ☐ USPS
- ☐ Other: _____

Special Instructions/QC Requirements & Comments:

Report revised. Previous report ID 8043008 06 29 18 1136.

MSS-F001-03/13

CHAIN-OF-CUSTODY RECORD

Company Name: Chesapeake GeoSciences, Inc.	Project Manager: Nancy Love
Project Name: Armed Forces Retirement Home	Project ID: CG-17-1111
Sampler(s): Meg Staines	P.O. Number: CG171111MS

Maryland Spectral Services, Inc.
1500 Caton Center Drive, Suite G
Baltimore, MD 21227
410–247–7600 • Fax 410–247–7602
labman@mdspectral.com

Matrix Codes: NW (nonpotable water)
PW (potable water)

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	VOCs EPA 8260	PAHs EPA 8270	TPH-GRO EPA 8015M	TPH-DRO EPA 8015M	TPH-ORO EPA 8015M	RCRA 8 Metals EPA 6020	PCBs EPA 8082	TPH-C7-12 EPA 8015M	Preservative: 1+1 HCL, H_2SO_4, Methanol, $Na_2S_2O_3$, $NaHCO_3$	Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank	MSS Lab ID
~~SB-76-03 (10.5')~~	~~4/27/18~~	~~16:40~~		X		2				X	X	X			4°C		~~8043008-11~~
~~SB-76-03 (10'-bim)~~	↓	~~16:45~~		X		1				X	X				↓	ANALYZE THIS SAMPLE	8043008-11
SB-76-D1		00:00		X		1				X	X						-12

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
(Printed) Meg Staines	04/29/18 22:00	(Printed) Nancy Love	(Printed) Nancy Love	4/30/18 15:20	(Printed)
Relinquished by: (Signature)	Date/Time	Received by Lab: (Signature)			
(Printed)	16:00 04/30/18	(Printed) Cory Coons			

Turn Around Time:
- ☐ Normal (7 day)
- ☐ 5 day
- ☐ 4 day
- ☐ 3 day
- ☐ Rush (2 day)
- ☐ Next Day
- ☐ Other: _____
- ☐ Specific Due Date: _____

Lab Use:
Temp 2.0 °C
- ☐ Received on Ice
- ☐ Received same day
- ☐ Preservation Appropriate

Sample Disposal:
- ☐ Return to Client
- ☐ Disposal by lab
- ☐ Archive for _____ days

Delivery Method:
- ☐ Courier
- ☐ Client
- ☐ UPS
- ☐ FedEx
- ☐ USPS
- ☐ Other: _____

Special Instructions/QC Requirements & Comments:

Report revised. Previous report ID 8043008 06'29 18 1136.

MSS-F001-03/13

53720

SUBCONTRACT ORDER
Maryland Spectral Services

8043008

Report revised. Previous Report ID 8043008 0029 18 1136.

SENDING LABORATORY:

Maryland Spectral Services
1500 Caton Center Dr. Suite G
Halethorpe, MD 21227
Phone: 410.247.7600
Project Manager: Cory Koons
Reports Email: Reporting@mdspectral.com

RECEIVING LABORATORY:

Enviro-Chem Laboratories, Inc
47 Loveton Circle, Suite K
Sparks, MD 21152
Phone :(410) 472-1112
Fax: (410) 472-1116

Due 4:00 PM 05/09/18

				Laboratory ID	Comments
Sample ID: 8043008-03	**SB-76-01 (9')**	**Soil**	**Sampled:04/27/18 10:50**		
6020 (RCRA8 Total)					
Containers Supplied: Glass Jar, 4 oz (B)					
Sample ID: 8043008-06	**SB-76-02 (10')**	**Soil**	**Sampled:04/27/18 12:55**		
6020 (RCRA8 Total)					
Containers Supplied: Glass Jar, 4 oz (B)					
Sample ID: 8043008-10	**SB-76-03 (3')**	**Soil**	**Sampled:04/27/18 15:05**		
6020 (RCRA8 Total)					
Containers Supplied: Glass Jar, 4 oz (B)					

Released By	Date	Received By	Date
Rachel Hunn	5/1/18 13:16		
Released By	Date	Received By	Date

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
VELAP ID 460040

11 May 2018

Nancy Love
Chesapeake GeoSciences, Inc.
5405 Twin Knolls Rd, Suite 1
Columbia, MD 21045
RE: ARMED FORCES RETIREMENT HOME

Enclosed are the results of analyses for samples received by the laboratory on 05/03/18 16:10.

A more detailed report format is available upon request, which lists the accreditation status for all analytical methods performed.

Please visit our website at www.mdspectral.com for a complete listing of our accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Rabecka Koons
Quality Assurance Officer

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:19

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-76-08 (8')		8050317-01	Soil	04/30/18 16:10	05/03/18 16:10
SB-76-08 (17.5')		8050317-02	Soil	04/30/18 16:40	05/03/18 16:10
SB-76-08 (25')		8050317-03	Soil	04/30/18 16:45	05/03/18 16:10
SB-76-04 (7')		8050317-04	Soil	04/30/18 09:30	05/03/18 16:10
SB-76-04 (10.5')		8050317-05	Soil	04/30/18 09:35	05/03/18 16:10
SB-76-04 (25')		8050317-06	Soil	04/30/18 10:40	05/03/18 16:10
SB-76-05 (7')		8050317-07	Soil	04/30/18 11:20	05/03/18 16:10
SB-76-05 (15.5')		8050317-08	Soil	04/30/18 11:50	05/03/18 16:10
SB-76-05 (21')		8050317-09	Soil	04/30/18 12:00	05/03/18 16:10
SB-76-06 (7.5')		8050317-10	Soil	04/30/18 12:55	05/03/18 16:10
SB-76-06 (SS)		8050317-11	Soil	04/30/18 12:25	05/03/18 16:10
SB-76-06 (12')		8050317-12	Soil	04/30/18 13:10	05/03/18 16:10
SB-76-06 (19')		8050317-13	Soil	04/30/18 13:15	05/03/18 16:10
SB-76-07 (1')		8050317-14	Soil	04/30/18 14:20	05/03/18 16:10
SB-76-07 (12')		8050317-15	Soil	04/30/18 15:00	05/03/18 16:10
SB-76-07 (23')		8050317-16	Soil	04/30/18 15:10	05/03/18 16:10
SB-76-D2		8050317-17	Soil	04/30/18 00:00	05/03/18 16:10

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:19

SB-76-08 (8')

8050317-01 (Soil)
Sample Date: 04/30/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	ND		mg/kg dry	9.2	9.2	1	05/04/18	05/07/18 18:19	SJA
Surrogate: o-Terphenyl			*70-130*	*79 %*		*05/04/18*		*05/07/18 18:19*	
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	ND		mg/kg dry	9	9	1	05/04/18	05/07/18 17:59	SJA
Surrogate: o-Terphenyl			*70-130*	*79 %*		*05/04/18*		*05/07/18 17:59*	
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**87**		%			1	05/10/18	05/11/18 10:31	GM

Rabecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:19

SB-76-08 (17.5')

8050317-02 (Soil)
Sample Date: 04/30/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	ND		mg/kg dry	9.5	9.5	1	05/04/18	05/07/18 18:45	SJA
Surrogate: o-Terphenyl			*70-130*	*77 %*	*05/04/18*		*05/07/18 18:45*		
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	ND		mg/kg dry	10	10	1	05/04/18	05/07/18 18:25	SJA
Surrogate: o-Terphenyl			*70-130*	*77 %*	*05/04/18*		*05/07/18 18:25*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**84**		%			1	05/10/18	05/11/18 10:31	GM
Wet Chemistry Performed at Enviro-Chem									
% Solids	**82.0**		%	1.00	1.00	1	05/04/18	05/04/18 15:36	FRD
Metals EPA 6020 Performed at Enviro-Chem									
Arsenic	**0.816**		mg/kg dry	0.460	0.460	2	05/07/18	05/09/18 11:46	MAP
Barium	**15.5**		mg/kg dry	0.460	0.460	2	05/07/18	05/09/18 11:46	MAP
Cadmium	ND		mg/kg dry	0.460	0.460	2	05/07/18	05/09/18 11:46	MAP
Chromium	**8.04**		mg/kg dry	0.460	0.460	2	05/07/18	05/09/18 13:36	MAP
Lead	**2.17**		mg/kg dry	0.460	0.460	2	05/07/18	05/09/18 11:46	MAP
Mercury	ND		mg/kg dry	0.0920	0.0920	2	05/07/18	05/09/18 11:46	MAP
Selenium	**1.65**		mg/kg dry	0.460	0.460	2	05/07/18	05/09/18 11:46	MAP
Silver	ND		mg/kg dry	0.460	0.460	2	05/07/18	05/09/18 11:46	MAP

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:19

SB-76-08 (25')

8050317-03 (Soil)
Sample Date: 04/30/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	ND		mg/kg dry	9.8	9.8	1	05/04/18	05/07/18 19:11	SJA
Surrogate: o-Terphenyl			*70-130*	*83 %*		*05/04/18*		*05/07/18 19:11*	
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	ND		mg/kg dry	10	10	1	05/04/18	05/07/18 18:51	SJA
Surrogate: o-Terphenyl			*70-130*	*83 %*		*05/04/18*		*05/07/18 18:51*	
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**82**		%			1	05/10/18	05/11/18 10:31	GM

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:19

SB-76-04 (7')

8050317-04 (Soil)
Sample Date: 04/30/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	ND		mg/kg dry	9.9	9.9	1	05/04/18	05/07/18 19:38	SJA
Surrogate: o-Terphenyl			*70-130*	*75 %*	*05/04/18*		*05/07/18 19:38*		
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	ND		mg/kg dry	10	10	1	05/04/18	05/07/18 19:18	SJA
Surrogate: o-Terphenyl			*70-130*	*75 %*	*05/04/18*		*05/07/18 19:18*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**81**		%			1	05/10/18	05/11/18 10:31	GM

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:19

SB-76-04 (10.5')

8050317-05 (Soil)
Sample Date: 04/30/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	**3980**		mg/kg dry	920	920	100	05/04/18	05/07/18 20:04	SJA
Surrogate: o-Terphenyl			*70-130*	*%*	*05/04/18*		*05/07/18 20:04*		*S-01*
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	**2040**		mg/kg dry	920	920	100	05/04/18	05/07/18 19:44	SJA
Surrogate: o-Terphenyl			*70-130*	*%*	*05/04/18*		*05/07/18 19:44*		*S-01*
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**87**		%			1	05/10/18	05/11/18 10:31	GM
Wet Chemistry Performed at Enviro-Chem									
% Solids	**70.4**		%	1.00	1.00	1	05/04/18	05/04/18 15:36	FRD
Metals EPA 6020 Performed at Enviro-Chem									
Arsenic	**4.34**		mg/kg dry	0.498	0.498	2	05/07/18	05/09/18 11:50	MAP
Barium	**43.1**		mg/kg dry	0.498	0.498	2	05/07/18	05/09/18 11:50	MAP
Cadmium	ND		mg/kg dry	0.498	0.498	2	05/07/18	05/09/18 11:50	MAP
Chromium	**41.4**		mg/kg dry	0.498	0.498	2	05/07/18	05/09/18 13:39	MAP
Lead	**8.04**		mg/kg dry	0.498	0.498	2	05/07/18	05/09/18 11:50	MAP
Mercury	ND		mg/kg dry	0.0997	0.0997	2	05/07/18	05/09/18 11:50	MAP
Selenium	**1.60**		mg/kg dry	0.498	0.498	2	05/07/18	05/09/18 11:50	MAP
Silver	ND		mg/kg dry	0.498	0.498	2	05/07/18	05/09/18 11:50	MAP

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:19

SB-76-04 (25')

8050317-06 (Soil)
Sample Date: 04/30/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	ND		mg/kg dry	9.6	9.6	1	05/04/18	05/07/18 20:30	SJA
Surrogate: o-Terphenyl			*70-130*	*89 %*	*05/04/18*		*05/07/18 20:30*		
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	ND		mg/kg dry	10	10	1	05/04/18	05/07/18 20:10	SJA
Surrogate: o-Terphenyl			*70-130*	*89 %*	*05/04/18*		*05/07/18 20:10*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**83**		%			1	05/10/18	05/11/18 10:31	GM

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
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Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:19

SB-76-05 (7')

8050317-07 (Soil)
Sample Date: 04/30/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	ND		mg/kg dry	9.9	9.9	1	05/04/18	05/07/18 20:57	SJA
Surrogate: o-Terphenyl			*70-130*	*78 %*	*05/04/18*		*05/07/18 20:57*		
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	ND		mg/kg dry	10	10	1	05/04/18	05/07/18 20:37	SJA
Surrogate: o-Terphenyl			*70-130*	*78 %*	*05/04/18*		*05/07/18 20:37*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**81**		%			1	05/10/18	05/11/18 10:31	GM

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
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Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:19

SB-76-05 (15.5')

8050317-08 (Soil)
Sample Date: 04/30/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	ND		mg/kg dry	9.4	9.4	1	05/04/18	05/07/18 21:23	SJA
Surrogate: o-Terphenyl			*70-130*	*76 %*	*05/04/18*		*05/07/18 21:23*		
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	ND		mg/kg dry	9	9	1	05/04/18	05/07/18 21:03	SJA
Surrogate: o-Terphenyl			*70-130*	*76 %*	*05/04/18*		*05/07/18 21:03*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**85**		%			1	05/10/18	05/11/18 10:31	GM
Wet Chemistry Performed at Enviro-Chem									
% Solids	**88.3**		%	1.00	1.00	1	05/04/18	05/04/18 15:36	FRD
Metals EPA 6020 Performed at Enviro-Chem									
Arsenic	**0.857**		mg/kg dry	0.412	0.412	2	05/07/18	05/09/18 12:05	MAP
Barium	**9.85**		mg/kg dry	0.412	0.412	2	05/07/18	05/09/18 12:05	MAP
Cadmium	ND		mg/kg dry	0.412	0.412	2	05/07/18	05/09/18 12:05	MAP
Chromium	**6.33**		mg/kg dry	0.412	0.412	2	05/07/18	05/09/18 13:48	MAP
Lead	**2.53**		mg/kg dry	0.412	0.412	2	05/07/18	05/09/18 12:05	MAP
Mercury	ND		mg/kg dry	0.0823	0.0823	2	05/07/18	05/09/18 12:05	MAP
Selenium	**0.651**		mg/kg dry	0.412	0.412	2	05/07/18	05/09/18 12:05	MAP
Silver	ND		mg/kg dry	0.412	0.412	2	05/07/18	05/09/18 12:05	MAP

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
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Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:19

SB-76-05 (21')

8050317-09 (Soil)
Sample Date: 04/30/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	ND		mg/kg dry	9.9	9.9	1	05/04/18	05/07/18 21:49	SJA
Surrogate: o-Terphenyl			*70-130*	*71 %*	*05/04/18*		*05/07/18 21:49*		
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	ND		mg/kg dry	10	10	1	05/04/18	05/07/18 21:29	SJA
Surrogate: o-Terphenyl			*70-130*	*71 %*	*05/04/18*		*05/07/18 21:29*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**81**		%			1	05/10/18	05/11/18 10:31	GM

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
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Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:19

SB-76-06 (7.5')

8050317-10 (Soil)
Sample Date: 04/30/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	ND		mg/kg dry	9.4	9.4	1	05/04/18	05/07/18 22:16	SJA
Surrogate: o-Terphenyl			*70-130*	*78 %*		*05/04/18*		*05/07/18 22:16*	
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	ND		mg/kg dry	9	9	1	05/04/18	05/07/18 21:56	SJA
Surrogate: o-Terphenyl			*70-130*	*78 %*		*05/04/18*		*05/07/18 21:56*	
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**85**		%			1	05/10/18	05/11/18 10:31	GM

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
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Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:19

SB-76-06 (SS)

8050317-11 (Soil)
Sample Date: 04/30/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
SEMIVOLATILE ORGANICS BY EPA METHOD 8270D (GC/MS)									
Acenaphthene	ND		ug/kg dry	294	118	1	05/07/18	05/09/18 14:23	WB
Acenaphthylene	ND		ug/kg dry	294	118	1	05/07/18	05/09/18 14:23	WB
Anthracene	ND		ug/kg dry	294	118	1	05/07/18	05/09/18 14:23	WB
Benzo[a]anthracene	ND		ug/kg dry	294	118	1	05/07/18	05/09/18 14:23	WB
Benzo[b]fluoranthene	ND		ug/kg dry	294	118	1	05/07/18	05/09/18 14:23	WB
Benzo[k]fluoranthene	ND		ug/kg dry	294	118	1	05/07/18	05/09/18 14:23	WB
Benzo[ghi]perylene	ND		ug/kg dry	294	118	1	05/07/18	05/09/18 14:23	WB
Benzo[a]pyrene	ND		ug/kg dry	294	118	1	05/07/18	05/09/18 14:23	WB
Chrysene	ND		ug/kg dry	294	118	1	05/07/18	05/09/18 14:23	WB
Dibenzo[a,h]anthracene	ND		ug/kg dry	294	118	1	05/07/18	05/09/18 14:23	WB
Fluoranthene	ND		ug/kg dry	294	118	1	05/07/18	05/09/18 14:23	WB
Fluorene	ND		ug/kg dry	294	118	1	05/07/18	05/09/18 14:23	WB
Indeno[1,2,3-cd]pyrene	ND		ug/kg dry	294	118	1	05/07/18	05/09/18 14:23	WB
2-Methylnaphthalene	ND		ug/kg dry	294	118	1	05/07/18	05/09/18 14:23	WB
Naphthalene	ND		ug/kg dry	294	118	1	05/07/18	05/09/18 14:23	WB
Phenanthrene	ND		ug/kg dry	294	118	1	05/07/18	05/09/18 14:23	WB
Pyrene	ND		ug/kg dry	294	118	1	05/07/18	05/09/18 14:23	WB
Surrogate: 2-Fluorophenol			*21-110*	*79 %*	*05/07/18*		*05/09/18 14:23*		
Surrogate: Phenol-d5			*10-110*	*80 %*	*05/07/18*		*05/09/18 14:23*		
Surrogate: Nitrobenzene-d5			*35-114*	*85 %*	*05/07/18*		*05/09/18 14:23*		
Surrogate: 2,4,6-Tribromophenol			*10-123*	*83 %*	*05/07/18*		*05/09/18 14:23*		
Surrogate: 2-Fluorobiphenyl			*43-116*	*77 %*	*05/07/18*		*05/09/18 14:23*		
Surrogate: Terphenyl-d14			*33-141*	*63 %*	*05/07/18*		*05/09/18 14:23*		
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	**399**		mg/kg dry	47.1	47.1	5	05/04/18	05/08/18 00:01	SJA
Surrogate: o-Terphenyl			*70-130*	*78 %*	*05/04/18*		*05/08/18 00:01*		

Rabecka Koons, Quality Assurance Officer

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As a NELAP accredited laboratory, MSS can provide a certification list upon request.

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:19

SB-76-06 (SS)

8050317-11 (Soil)
Sample Date: 04/30/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	**407**		mg/kg dry	47	47	5	05/04/18	05/07/18 23:41	SJA
Surrogate: o-Terphenyl			*70-130*	*78 %*	*05/04/18*		*05/07/18 23:41*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**85**		%			1	05/10/18	05/11/18 10:31	GM
POLYCHLORINATED BIPHENYLS BY EPA 3540/8082 (GC/ECD)									
Aroclor-1016	ND		ug/kg dry	97.6	97.6	1	05/08/18	05/09/18 15:36	SJA
Aroclor-1221	ND		ug/kg dry	200	200	1	05/08/18	05/09/18 15:36	SJA
Aroclor-1232	ND		ug/kg dry	97.6	97.6	1	05/08/18	05/09/18 15:36	SJA
Aroclor-1242	ND		ug/kg dry	97.6	97.6	1	05/08/18	05/09/18 15:36	SJA
Aroclor-1248	ND		ug/kg dry	97.6	97.6	1	05/08/18	05/09/18 15:36	SJA
Aroclor-1254	ND		ug/kg dry	97.6	97.6	1	05/08/18	05/09/18 15:36	SJA
Aroclor-1260	ND		ug/kg dry	97.6	97.6	1	05/08/18	05/09/18 15:36	SJA
Aroclor-1262	ND		ug/kg dry	97.6	97.6	1	05/08/18	05/09/18 15:36	SJA
Aroclor-1268	ND		ug/kg dry	97.6	97.6	1	05/08/18	05/09/18 15:36	SJA
Surrogate: Tetrachloro-m-xylene			*40-150*	*71 %*	*05/08/18*		*05/09/18 15:36*		
Surrogate: Decachlorobiphenyl			*40-150*	*73 %*	*05/08/18*		*05/09/18 15:36*		

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Rabecka Koons, Quality Assurance Officer

Analytical Results

1500 Caton Center Dr Suite G
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Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:19

SB-76-06 (12')

8050317-12 (Soil)
Sample Date: 04/30/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	**4550**		mg/kg dry	920	920	100	05/04/18	05/08/18 00:27	SJA
Surrogate: o-Terphenyl			*70-130*	*%*	*05/04/18*		*05/08/18 00:27*		*S-01*
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	**2330**		mg/kg dry	920	920	100	05/04/18	05/08/18 00:07	SJA
Surrogate: o-Terphenyl			*70-130*	*%*	*05/04/18*		*05/08/18 00:07*		*S-01*
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**87**		%			1	05/10/18	05/11/18 10:31	GM
Wet Chemistry Performed at Enviro-Chem									
% Solids	**77.6**		%	1.00	1.00	1	05/04/18	05/04/18 15:36	FRD
Metals EPA 6020 Performed at Enviro-Chem									
Arsenic	**1.96**		mg/kg dry	0.423	0.423	2	05/07/18	05/09/18 12:08	MAP
Barium	**57.4**		mg/kg dry	0.423	0.423	2	05/07/18	05/09/18 12:08	MAP
Cadmium	ND		mg/kg dry	0.423	0.423	2	05/07/18	05/09/18 12:08	MAP
Chromium	**17.7**		mg/kg dry	0.423	0.423	2	05/07/18	05/09/18 13:51	MAP
Lead	**7.91**		mg/kg dry	0.423	0.423	2	05/07/18	05/09/18 12:08	MAP
Mercury	ND		mg/kg dry	0.0845	0.0845	2	05/07/18	05/09/18 12:08	MAP
Selenium	**2.02**		mg/kg dry	0.423	0.423	2	05/07/18	05/09/18 12:08	MAP
Silver	ND		mg/kg dry	0.423	0.423	2	05/07/18	05/09/18 12:08	MAP

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
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Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:19

SB-76-06 (19')

8050317-13 (Soil)
Sample Date: 04/30/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	ND		mg/kg dry	9.6	9.6	1	05/04/18	05/08/18 00:53	SJA
Surrogate: o-Terphenyl			*70-130*	*88 %*	*05/04/18*		*05/08/18 00:53*		
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	ND		mg/kg dry	10	10	1	05/04/18	05/08/18 00:33	SJA
Surrogate: o-Terphenyl			*70-130*	*88 %*	*05/04/18*		*05/08/18 00:33*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**83**		%			1	05/10/18	05/11/18 10:31	GM

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:19

SB-76-07 (1')

8050317-14 (Soil)
Sample Date: 04/30/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	ND		mg/kg dry	9.8	9.8	1	05/04/18	05/08/18 01:20	SJA
Surrogate: o-Terphenyl			*70-130*	*89 %*	*05/04/18*		*05/08/18 01:20*		
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	ND		mg/kg dry	10	10	1	05/04/18	05/08/18 01:00	SJA
Surrogate: o-Terphenyl			*70-130*	*89 %*	*05/04/18*		*05/08/18 01:00*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**82**		%			1	05/10/18	05/11/18 10:31	GM
Wet Chemistry Performed at Enviro-Chem									
% Solids	**76.8**		%	1.00	1.00	1	05/04/18	05/04/18 15:36	FRD
Metals EPA 6020 Performed at Enviro-Chem									
Arsenic	**3.12**		mg/kg dry	0.511	0.511	2	05/07/18	05/09/18 12:12	MAP
Barium	**22.3**		mg/kg dry	0.511	0.511	2	05/07/18	05/09/18 12:12	MAP
Cadmium	ND		mg/kg dry	0.511	0.511	2	05/07/18	05/09/18 12:12	MAP
Chromium	**15.2**		mg/kg dry	0.511	0.511	2	05/07/18	05/09/18 13:54	MAP
Lead	**5.82**		mg/kg dry	0.511	0.511	2	05/07/18	05/09/18 12:12	MAP
Mercury	ND		mg/kg dry	0.102	0.102	2	05/07/18	05/09/18 12:12	MAP
Selenium	**1.14**		mg/kg dry	0.511	0.511	2	05/07/18	05/09/18 12:12	MAP
Silver	ND		mg/kg dry	0.511	0.511	2	05/07/18	05/09/18 12:12	MAP

Rebecka Koons

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Analytical Results

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Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:19

SB-76-07 (12')

8050317-15 (Soil)
Sample Date: 04/30/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	**3750**		mg/kg dry	1030	1030	100	05/04/18	05/08/18 01:46	SJA
Surrogate: o-Terphenyl			*70-130*	*%*	*05/04/18*		*05/08/18 01:46*		*S-01*
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	**2050**		mg/kg dry	1030	1030	100	05/04/18	05/08/18 01:26	SJA
Surrogate: o-Terphenyl			*70-130*	*%*	*05/04/18*		*05/08/18 01:26*		*S-01*
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**78**		%			1	05/10/18	05/11/18 10:31	GM

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Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:19

SB-76-07 (23')

8050317-16 (Soil)
Sample Date: 04/30/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	ND		mg/kg dry	11.0	11.0	1	05/04/18	05/08/18 02:13	SJA
Surrogate: o-Terphenyl			*70-130*	*69 %*	*05/04/18*		*05/08/18 02:13*		*S-FAIL*
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	ND		mg/kg dry	11	11	1	05/04/18	05/08/18 01:52	SJA
Surrogate: o-Terphenyl			*70-130*	*69 %*	*05/04/18*		*05/08/18 01:52*		*S-FAIL*
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**73**		%			1	05/10/18	05/11/18 10:31	GM

Rabecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:19

SB-76-D2

8050317-17 (Soil)
Sample Date: 04/30/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	**4830**		mg/kg dry	941	941	100	05/04/18	05/08/18 02:39	SJA
Surrogate: o-Terphenyl			*70-130*	*%*	*05/04/18*		*05/08/18 02:39*		*S-01*
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	**2510**		mg/kg dry	941	941	100	05/04/18	05/08/18 02:19	SJA
Surrogate: o-Terphenyl			*70-130*	*%*	*05/04/18*		*05/08/18 02:19*		*S-01*
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**85**		%			1	05/10/18	05/11/18 10:31	GM

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Baltimore MD 21227
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Analytical Results

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:19

Notes and Definitions

S-FAIL	Surrogate recovery was outside of established QC limits
S-01	The surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference.
IS-07	Internal standard area outside control limits due to sample matrix effect.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Rabecka Koons, Quality Assurance Officer

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CHAIN-OF-CUSTODY RECORD

Company Name: Chesapeake GeoSciences, Inc.	Project Manager: Nancy Love
Project Name: Armed Forces Retirement Home	Project ID: CG-17-1111
Sampler(s): Meg Staines	P.O. Number: CG171111MS

Maryland Spectral Services, Inc.
1500 Caton Center Drive, Suite G
Baltimore, MD 21227
410–247–7600 • Fax 410–247–7602
labman@mdspectral.com

Matrix Codes: NW (nonpotable water)
PW (potable water)

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	VOCs EPA 8260	PAHs EPA 8270	TPH-GRO EPA 8015M	TPH-DRO EPA 8015M	TPH-ORO EPA 8015M	RCRA 8 Metals EPA 6020	PCBs EPA 8082	TPH-C7-12 EPA 8015M			Preservative: 1+1 HCL, H_2SO_4, Methanol, $Na_2S_2O_3$, $NaHCO_3$	Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank	MSS Lab ID
SB-76-08 (8')	4/30/18	16:10		X		1				X	X								805031?-01
SB-76-08 (17.5')	4/30/18	16:40		X		2				X	X	X							-02
SB-76-08 (25')	4/30/18	16:45		X		1				X	X								-03
SB-76-04 (7')	4/30/18	09:30		X		1				X	X								-04
SB-76-04 (10.5')	4/30/18	09:35		X		2				X	X	X							-05
~~SB-76-04 (18')~~	~~4/30/18~~	~~10:35~~		~~X~~		~~1~~				~~X~~	~~X~~								
SB-76-04 (25')	4/30/18	10:40		X		1				X	X								-06
SB-76-05 (7')	4/30/18	11:20		X		1				X	X								-07
SB-76-05 (15.5')	4/30/18	11:50		X		2				X	X	X							-08
SB-76-05 (21')	4/30/18	12:00		X		1				X	X								-09

Analysis Requested

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
(Printed) Meg Staines	05/01/18 13:20	(Printed) Devin Glancey	(Printed) Devin Glancey	5/3/18 16:10	(Printed)
Relinquished by: (Signature)	Date/Time	Received by Lab: (Signature)			
(Printed)	5/3/18 1610	(Printed) Grady Mulhall			

Turn Around Time:

- ☐ Normal (7 day)
- ☐ 5 day
- ☐ 4 day
- ☐ 3 day
- ☐ Rush (2 day)
- ☐ Next Day
- ☐ Other: _____
- ☐ Specific Due Date: _____

Lab Use:

Temp: 4.0 °C
- ☑ Received on Ice
- ☐ Received same day
- ☐ Preservation Appropriate

Delivery Method:

- ☐ Courier
- ☐ Client
- ☐ UPS
- ☐ FedEx
- ☐ USPS
- ☐ Other: _____

Special Instructions/QC Requirements & Comments:

Sample Disposal:

- ☐ Return to Client
- ☐ Disposal by lab
- ☐ Archive for _____ days

CHAIN-OF-CUSTODY RECORD

Company Name: Chesapeake GeoSciences, Inc.	Project Manager: Nancy Love
Project Name: Armed Forces Retirement Home	Project ID: CG-17-1111
Sampler(s): Meg Staines	P.O. Number: CG171111MS

Maryland Spectral Services, Inc.
1500 Caton Center Drive, Suite G
Baltimore, MD 21227
410–247–7600 • Fax 410–247–7602
labman@mdspectral.com

Matrix Codes: NW (nonpotable water)
PW (potable water)

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	VOCs EPA 8260	PAHs EPA 8270	TPH-GRO EPA 8015M	TPH-DRO EPA 8015M	TPH-ORO EPA 8015M	RCRA 8 Metals EPA 6020	PCBs EPA 8082	TPH-C7-12 EPA 8015M			Preservative: 1+1 HCL, H_2SO_4, Methanol, $Na_2S_2O_3$, $NaHCO_3$	Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank	MSS Lab ID
SB-76-06 (7.5')	4/30/18	12:55		X		1				X	X								805031 7-10
SB-76-06 (SS)	4/30/18	12:25		X		1		X		X	X		X						-11
SB-76-06 (12')	4/30/18	13:10		X		2				X	X	X							-12
SB-76-06 (19')	4/30/18	13:15		X		1				X	X								-13
SB-76-07 (1')	4/30/18	14:20		X		2				X	X	X							-14
SB-76-07 (12')	4/30/18	15:00		X		1				X	X								-15
SB-76-07 (23')	4/30/18	15:10		X		1				X	X								-16
SB-76-D2	4/30/18	00:00		X		1				X	X								-17

Analysis Requested

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
(Printed) Meg Staines	05/01/18 13:20	(Printed) Devin Glancy	(Printed) Devin Glancy	5/3/18 16:10	(Printed)
Relinquished by: (Signature)	Date/Time	Received by Lab: (Signature)	Turn Around Time:	Lab Use:	
(Printed)	5/3/18 1610	(Printed) Grady Mulhall	☐ Normal (7 day) ☐ 5 day ☐ 4 day ☐ 3 day ☐ Rush (2 day) ☐ Next Day ☐ Other: _____ ☐ Specific Due Date: _____	Temp: 4.0 °C ☑ Received on Ice ☐ Received same day ☐ Preservation Appropriate	

Delivery Method:
- ☐ Courier
- ☐ Client
- ☐ UPS
- ☐ FedEx
- ☐ USPS
- ☐ Other: _____

Special Instructions/QC Requirements & Comments:

Sample Disposal:
- ☐ Return to Client
- ☐ Disposal by lab
- ☐ Archive for _____ days

SUBCONTRACT ORDER
Maryland Spectral Services

8050317

SENDING LABORATORY:

Maryland Spectral Services
1500 Caton Center Dr. Suite G
Halethorpe, MD 21227
Phone: 410.247.7600
Project Manager: Cory Koons
Reports Email: Reporting@mdspectral.com

RECEIVING LABORATORY:

Enviro-Chem Laboratories, Inc
47 Loveton Circle, Suite K
Sparks, MD 21152
Phone :(410) 472-1112
Fax: (410) 472-1116

Due 4:00 PM 05/14/18

				Laboratory ID	Comments
Sample ID: 8050317-02	**SB-76-08(17.5')**	**Soil**	**Sampled:04/30/18 16:40**		
6020 (RCRA8 Total)					
Containers Supplied:					
Glass Jar, 4 oz (B)					
Sample ID: 8050317-05	**SB-76-04(10.5')**	**Soil**	**Sampled:04/30/18 09:35**		
6020 (RCRA8 Total)					
Containers Supplied:					
Glass Jar, 4 oz (B)					
Sample ID: 8050317-08	**SB-76-05(15.5')**	**Soil**	**Sampled:04/30/18 11:50**		
6020 (RCRA8 Total)					
Containers Supplied:					
Glass Jar, 4 oz (B)					
Sample ID: 8050317-12	**SB-76-06(12')**	**Soil**	**Sampled:04/30/18 13:10**		
6020 (RCRA8 Total)					
Containers Supplied:					
Glass Jar, 4 oz (B)					

Released By	5/4/18 1200 Date	Received By	5/4/18 Date
Released By	Date	Received By	Date

SUBCONTRACT ORDER
Maryland Spectral Services

8050317

Due 4:00 PM 05/14/18				**Laboratory ID**	**Comments**
Sample ID: 8050317-14	**SB-76-07(1')**	**Soil**	**Sampled:04/30/18 14:20**		
6020 (RCRA8 Total)					

Containers Supplied:
Glass Jar, 4 oz (B)

Relinquished By	Date	Received By	Date
5/4/18 12:00		5/4/18	
Relinquished By	Date	Received By	Date

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
VELAP ID 460040

11 May 2018

Nancy Love
Chesapeake GeoSciences, Inc.
5405 Twin Knolls Rd, Suite 1
Columbia, MD 21045
RE: ARMED FORCES RETIREMENT HOME

Enclosed are the results of analyses for samples received by the laboratory on 05/03/18 16:10.

A more detailed report format is available upon request, which lists the accreditation status for all analytical methods performed.

Please visit our website at www.mdspectral.com for a complete listing of our accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Rabecka Koons
Quality Assurance Officer

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:05

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-76-09 (SS)		8050316-01	Soil	05/01/18 09:15	05/03/18 16:10
SB-76-09 (0.5')		8050316-02	Soil	05/01/18 10:50	05/03/18 16:10
SB-76-09 (5')		8050316-03	Soil	05/01/18 11:00	05/03/18 16:10
SB-76-09 (12')		8050316-04	Soil	05/01/18 10:55	05/03/18 16:10
SB-76-10 (8.5')		8050316-05	Soil	05/01/18 12:50	05/03/18 16:10
SB-76-10 (10')		8050316-06	Soil	05/01/18 12:20	05/03/18 16:10
SB-76-10 (19.5')		8050316-07	Soil	05/01/18 12:55	05/03/18 16:10
SB-76-D3		8050316-08	Soil	05/01/18 00:00	05/03/18 16:10

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Analytical Results

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Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:05

SB-76-09 (SS)

8050316-01 (Soil)
Sample Date: 05/01/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
SEMIVOLATILE ORGANICS BY EPA METHOD 8270D (GC/MS)									
Acenaphthene	ND		ug/kg dry	284	114	1	05/07/18	05/08/18 20:34	WB
Acenaphthylene	ND		ug/kg dry	284	114	1	05/07/18	05/08/18 20:34	WB
Anthracene	ND		ug/kg dry	284	114	1	05/07/18	05/08/18 20:34	WB
Benzo[a]anthracene	ND		ug/kg dry	284	114	1	05/07/18	05/08/18 20:34	WB
Benzo[b]fluoranthene	ND		ug/kg dry	284	114	1	05/07/18	05/08/18 20:34	WB
Benzo[k]fluoranthene	ND		ug/kg dry	284	114	1	05/07/18	05/08/18 20:34	WB
Benzo[ghi]perylene	ND		ug/kg dry	284	114	1	05/07/18	05/08/18 20:34	WB
Benzo[a]pyrene	ND		ug/kg dry	284	114	1	05/07/18	05/08/18 20:34	WB
Chrysene	ND		ug/kg dry	284	114	1	05/07/18	05/08/18 20:34	WB
Dibenzo[a,h]anthracene	ND		ug/kg dry	284	114	1	05/07/18	05/08/18 20:34	WB
Fluoranthene	ND		ug/kg dry	284	114	1	05/07/18	05/08/18 20:34	WB
Fluorene	ND		ug/kg dry	284	114	1	05/07/18	05/08/18 20:34	WB
Indeno[1,2,3-cd]pyrene	ND		ug/kg dry	284	114	1	05/07/18	05/08/18 20:34	WB
2-Methylnaphthalene	ND		ug/kg dry	284	114	1	05/07/18	05/08/18 20:34	WB
Naphthalene	ND		ug/kg dry	284	114	1	05/07/18	05/08/18 20:34	WB
Phenanthrene	ND		ug/kg dry	284	114	1	05/07/18	05/08/18 20:34	WB
Pyrene	ND		ug/kg dry	284	114	1	05/07/18	05/08/18 20:34	WB
Surrogate: 2-Fluorophenol			*21-110*	*65 %*			*05/07/18*	*05/08/18 20:34*	
Surrogate: Phenol-d5			*10-110*	*67 %*			*05/07/18*	*05/08/18 20:34*	
Surrogate: Nitrobenzene-d5			*35-114*	*74 %*			*05/07/18*	*05/08/18 20:34*	
Surrogate: 2,4,6-Tribromophenol			*10-123*	*76 %*			*05/07/18*	*05/08/18 20:34*	
Surrogate: 2-Fluorobiphenyl			*43-116*	*68 %*			*05/07/18*	*05/08/18 20:34*	
Surrogate: Terphenyl-d14			*33-141*	*78 %*			*05/07/18*	*05/08/18 20:34*	
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	ND		mg/kg dry	9.1	9.1	1	05/07/18	05/09/18 15:11	SJA
Surrogate: o-Terphenyl			*70-130*	*80 %*			*05/07/18*	*05/09/18 15:11*	

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Analytical Results

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410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:05

SB-76-09 (SS)

8050316-01 (Soil)
Sample Date: 05/01/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	ND		mg/kg dry	9	9	1	05/07/18	05/09/18 15:11	SJA
Surrogate: o-Terphenyl			*70-130*	*80 %*	*05/07/18*		*05/09/18 15:11*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**88**		%			1	05/10/18	05/11/18 10:31	GM
POLYCHLORINATED BIPHENYLS BY EPA 3540/8082 (GC/ECD)									
Aroclor-1016	ND		ug/kg dry	94.3	94.3	1	05/08/18	05/09/18 15:09	SJA
Aroclor-1221	ND		ug/kg dry	193	193	1	05/08/18	05/09/18 15:09	SJA
Aroclor-1232	ND		ug/kg dry	94.3	94.3	1	05/08/18	05/09/18 15:09	SJA
Aroclor-1242	ND		ug/kg dry	94.3	94.3	1	05/08/18	05/09/18 15:09	SJA
Aroclor-1248	ND		ug/kg dry	94.3	94.3	1	05/08/18	05/09/18 15:09	SJA
Aroclor-1254	ND		ug/kg dry	94.3	94.3	1	05/08/18	05/09/18 15:09	SJA
Aroclor-1260	ND		ug/kg dry	94.3	94.3	1	05/08/18	05/09/18 15:09	SJA
Aroclor-1262	ND		ug/kg dry	94.3	94.3	1	05/08/18	05/09/18 15:09	SJA
Aroclor-1268	ND		ug/kg dry	94.3	94.3	1	05/08/18	05/09/18 15:09	SJA
Surrogate: Tetrachloro-m-xylene			*40-150*	*68 %*	*05/08/18*		*05/09/18 15:09*		
Surrogate: Decachlorobiphenyl			*40-150*	*84 %*	*05/08/18*		*05/09/18 15:09*		

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

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Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:05

SB-76-09 (0.5')

8050316-02 (Soil)
Sample Date: 05/01/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	**13.0**		mg/kg dry	9.3	9.3	1	05/07/18	05/09/18 15:38	SJA
Surrogate: o-Terphenyl			*70-130*	*84 %*	*05/07/18*		*05/09/18 15:38*		
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	ND		mg/kg dry	9	9	1	05/07/18	05/09/18 15:38	SJA
Surrogate: o-Terphenyl			*70-130*	*84 %*	*05/07/18*		*05/09/18 15:38*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**86**		%			1	05/10/18	05/11/18 10:31	GM
Wet Chemistry Performed at Enviro-Chem									
% Solids	**87.6**		%	1.00	1.00	1	05/04/18	05/04/18 15:36	FRD
Metals EPA 6020 Performed at Enviro-Chem									
Arsenic	**5.15**		mg/kg dry	0.380	0.380	2	05/07/18	05/09/18 11:24	MAP
Barium	**36.9**		mg/kg dry	0.380	0.380	2	05/07/18	05/09/18 11:24	MAP
Cadmium	ND		mg/kg dry	0.380	0.380	2	05/07/18	05/09/18 11:24	MAP
Chromium	**19.2**		mg/kg dry	0.380	0.380	2	05/07/18	05/09/18 13:18	MAP
Lead	**8.40**		mg/kg dry	0.380	0.380	2	05/07/18	05/09/18 11:24	MAP
Mercury	ND		mg/kg dry	0.0761	0.0761	2	05/07/18	05/09/18 11:24	MAP
Selenium	**2.32**		mg/kg dry	0.380	0.380	2	05/07/18	05/09/18 11:24	MAP
Silver	ND		mg/kg dry	0.380	0.380	2	05/07/18	05/09/18 11:24	MAP

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:05

SB-76-09 (5')

8050316-03 (Soil)
Sample Date: 05/01/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	ND		mg/kg dry	9.4	9.4	1	05/07/18	05/09/18 16:05	SJA
Surrogate: o-Terphenyl			*70-130*	*73 %*	*05/07/18*		*05/09/18 16:05*		
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	ND		mg/kg dry	9	9	1	05/07/18	05/09/18 16:05	SJA
Surrogate: o-Terphenyl			*70-130*	*73 %*	*05/07/18*		*05/09/18 16:05*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**85**		%			1	05/10/18	05/11/18 10:31	GM

Rabecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:05

SB-76-09 (12')

8050316-04 (Soil)
Sample Date: 05/01/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	ND		mg/kg dry	9.9	9.9	1	05/07/18	05/09/18 16:32	SJA
Surrogate: o-Terphenyl			*70-130*	*68 %*	*05/07/18*		*05/09/18 16:32*		*S-FAIL*
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	ND		mg/kg dry	10	10	1	05/07/18	05/09/18 16:32	SJA
Surrogate: o-Terphenyl			*70-130*	*68 %*	*05/07/18*		*05/09/18 16:32*		*S-FAIL*
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**81**		%			1	05/10/18	05/11/18 10:31	GM

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
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Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:05

SB-76-10 (8.5')

8050316-05 (Soil)
Sample Date: 05/01/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	**524**		mg/kg dry	50.6	50.6	5	05/07/18	05/09/18 16:59	SJA
Surrogate: o-Terphenyl			*70-130*	*78 %*	*05/07/18*		*05/09/18 16:59*		
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	**239**		mg/kg dry	51	51	5	05/07/18	05/09/18 16:59	SJA
Surrogate: o-Terphenyl			*70-130*	*78 %*	*05/07/18*		*05/09/18 16:59*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**79**		%			1	05/10/18	05/11/18 10:31	GM

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Rabecka Koons, Quality Assurance Officer

As a NELAP accredited laboratory, MSS can provide a certification list upon request.

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:05

SB-76-10 (10')

8050316-06 (Soil)
Sample Date: 05/01/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	**5140**		mg/kg dry	976	976	100	05/07/18	05/09/18 17:26	SJA
Surrogate: o-Terphenyl			*70-130*	*116 %*		*05/07/18*		*05/09/18 17:26*	
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	**1890**		mg/kg dry	976	976	100	05/07/18	05/09/18 17:26	SJA
Surrogate: o-Terphenyl			*70-130*	*%*		*05/07/18*		*05/09/18 17:26*	*S-01*
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**82**		%			1	05/10/18	05/11/18 10:31	GM
Wet Chemistry Performed at Enviro-Chem									
% Solids	**81.9**		%	1.00	1.00	1	05/04/18	05/04/18 15:36	FRD
Metals EPA 6020 Performed at Enviro-Chem									
Arsenic	**4.24**		mg/kg dry	0.461	0.461	2	05/07/18	05/09/18 11:42	MAP
Barium	**168**		mg/kg dry	0.461	0.461	2	05/07/18	05/09/18 11:42	MAP
Cadmium	ND		mg/kg dry	0.461	0.461	2	05/07/18	05/09/18 11:42	MAP
Chromium	**35.9**		mg/kg dry	0.461	0.461	2	05/07/18	05/09/18 13:33	MAP
Lead	**11.9**		mg/kg dry	0.461	0.461	2	05/07/18	05/09/18 11:42	MAP
Mercury	ND		mg/kg dry	0.0921	0.0921	2	05/07/18	05/09/18 11:42	MAP
Selenium	**4.07**		mg/kg dry	0.461	0.461	2	05/07/18	05/09/18 11:42	MAP
Silver	ND		mg/kg dry	0.461	0.461	2	05/07/18	05/09/18 11:42	MAP

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:05

SB-76-10 (19.5')

8050316-07 (Soil)
Sample Date: 05/01/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	ND		mg/kg dry	9.6	9.6	1	05/07/18	05/09/18 17:53	SJA
Surrogate: o-Terphenyl			*70-130*	*70 %*	*05/07/18*		*05/09/18 17:53*		
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	ND		mg/kg dry	10	10	1	05/07/18	05/09/18 17:53	SJA
Surrogate: o-Terphenyl			*70-130*	*70 %*	*05/07/18*		*05/09/18 17:53*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**83**		%			1	05/10/18	05/11/18 10:31	GM

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:05

SB-76-D3

8050316-08 (Soil)
Sample Date: 05/01/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
DIESEL RANGE ORGANICS BY EPA 3540/8015B									
Diesel-Range Organics	ND		mg/kg dry	9.0	9.0	1	05/07/18	05/09/18 18:20	SJA
Surrogate: o-Terphenyl			*70-130*	*77 %*	*05/07/18*		*05/09/18 18:20*		
OIL RANGE ORGANICS BY EPA 3540/8015M									
Oil-Range Organics C28-C36	ND		mg/kg dry	9	9	1	05/07/18	05/09/18 18:20	SJA
Surrogate: o-Terphenyl			*70-130*	*77 %*	*05/07/18*		*05/09/18 18:20*		
PERCENT SOLIDS BY ASTM D2216-05									
Percent Solids	**89**		%			1	05/10/18	05/11/18 10:31	GM

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
05/11/18 11:05

Notes and Definitions

S-FAIL	Surrogate recovery was outside of established QC limits
S-01	The surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

CHAIN-OF-CUSTODY RECORD

Company Name: Chesapeake GeoSciences, Inc.	Project Manager: Nancy Love
Project Name: Armed Forces Retirement Home	Project ID: CG-17-1111
Sampler(s): Meg Staines + Devin Glancey	P.O. Number: CG171111MS

Maryland Spectral Services, Inc.
1500 Caton Center Drive, Suite G
Baltimore, MD 21227
410–247–7600 • Fax 410–247–7602
labman@mdspectral.com

Matrix Codes: NW (nonpotable water)
PW (potable water)

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	VOCs EPA 8260	PAHs EPA 8270	TPH-GRO EPA 8015M	TPH-DRO EPA 8015M	TPH-ORO EPA 8015M	RCRA 8 Metals EPA 6020	PCBs EPA 8082	TPH-C7-12 EPA 8015M			Preservative: 1+1 HCL, H_2SO_4, Methanol, $Na_2S_2O_3$, $NaHCO_3$	Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank	MSS Lab ID
SB-76-09 (SS)	5/1/18	09:15		X		1		X		X	X		X				Cool 4°C		805031b-01
SB-76-09 (0.5')		10:50		X		2				X	X	X							-02
SB-76-09 (5')		11:00		X		1				X	X								-03
SB-76-09 (12')		10:55		X		1				X	X								-04
SB-76-10 (8.5')		12:50		X		1				X	X								-05
SB-76-10 (10')		12:20		X		2				X	X	X							-06
SB-76-10 (19.5')		12:55		X		1				X	X								-07
SB-76-D3		00:00		X		1				X	X								-08

Analysis Requested

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Devin Glancey	5/3/18 16:05				
(Printed) Devin Glancey		(Printed)	(Printed)		(Printed)
Relinquished by: (Signature)	Date/Time	Received by Lab: (Signature)			
	5/3/18 1610				
(Printed)		(Printed) Grady Mullinax			

Turn Around Time:
- [X] Normal (7 day)
- [ ] 5 day
- [ ] 4 day
- [ ] 3 day
- [ ] Rush (2 day)
- [ ] Next Day
- [ ] Other: _____
- [ ] Specific Due Date: _____

Lab Use:
Temp 4.0 °C
- [X] Received on Ice
- [ ] Received same day
- [ ] Preservation Appropriate

Delivery Method:
- [ ] Courier
- [X] Client
- [ ] UPS
- [ ] FedEx
- [ ] USPS
- [ ] Other:_____

Special Instructions/QC Requirements & Comments:
These samples go with previous AFRH samples on AFRH project 4/23-4/30/18

Sample Disposal:
- [ ] Return to Client
- [ ] Disposal by lab
- [ ] Archive for _____ days

SUBCONTRACT ORDER
Maryland Spectral Services

8050316

SENDING LABORATORY:

Maryland Spectral Services
1500 Caton Center Dr. Suite G
Halethorpe, MD 21227
Phone: 410.247.7600
Project Manager: Cory Koons
Reports Email: Reporting@mdspectral.com

RECEIVING LABORATORY:

Enviro-Chem Laboratories, Inc
47 Loveton Circle, Suite K
Sparks, MD 21152
Phone :(410) 472-1112
Fax: (410) 472-1116

Due 4:00 PM 05/14/18

				Laboratory ID	Comments
Sample ID: 8050316-02	**SB-76-09(0.5')**	**Soil**	**Sampled:05/01/18 10:50**		
6020 (RCRA8 Total)					
Containers Supplied: Glass Jar, 4 oz (B)					
Sample ID: 8050316-06	**SB-76-10(10')**	**Soil**	**Sampled:05/01/18 12:20**		
6020 (RCRA8 Total)					
Containers Supplied: Glass Jar, 4 oz (B)					

Relinquished By	Date	Received By	Date
[signature]	5/4/18 1200	[signature]	5/4/18
Relinquished By	Date	Received By	Date

APPENDIX N

BUILDING 46 – SUBSURFACE VAPOR SAMPLE LABORATORY ANALYTICAL REPORTS

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
VELAP ID 460040

06 June 2018

Nancy Love
Chesapeake GeoSciences, Inc.
5405 Twin Knolls Rd, Suite 1
Columbia, MD 21045
RE: PHASE 2 SITE ASSESSMENT

Enclosed are the results of analyses for samples received by the laboratory on 05/29/18 10:10.

A more detailed report format is available upon request, which lists the accreditation status for all analytical methods performed.

Please visit our website at www.mdspectral.com for a complete listing of our accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Rabecka Koons
Quality Assurance Officer

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: PHASE 2 SITE ASSESSMENT

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/06/18 10:01

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
VMP-01		8052901-01	Vapor	05/24/18 15:40	05/29/18 10:10
VMP-02		8052901-02	Vapor	05/24/18 15:30	05/29/18 10:10
VMP-04		8052901-03	Vapor	05/24/18 15:59	05/29/18 10:10
VMP-05		8052901-04	Vapor	05/24/18 17:50	05/29/18 10:10
VMP-06		8052901-05	Vapor	05/24/18 15:48	05/29/18 10:10

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: PHASE 2 SITE ASSESSMENT

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/06/18 10:01

VMP-01

8052901-01RE1 (Vapor)
Sample Date: 05/24/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD TO-15 (GC/MS)									
Acetone	ND		ug/m³	24.0	24.0	10	05/30/18	05/30/18 22:22	WB
Benzene	ND		ug/m³	6.40	1.60	10	05/30/18	05/30/18 22:22	WB
Benzyl chloride	ND		ug/m³	10.0	2.50	10	05/30/18	05/30/18 22:22	WB
Bromodichloromethane	ND		ug/m³	13.0	3.25	10	05/30/18	05/30/18 22:22	WB
Bromoform	ND		ug/m³	21.0	5.25	10	05/30/18	05/30/18 22:22	WB
Bromomethane	ND		ug/m³	7.80	1.95	10	05/30/18	05/30/18 22:22	WB
1,3-Butadiene	ND		ug/m³	4.40	4.40	10	05/30/18	05/30/18 22:22	WB
Carbon disulfide	ND		ug/m³	6.20	1.55	10	05/30/18	05/30/18 22:22	WB
Carbon tetrachloride	ND		ug/m³	13.0	3.25	10	05/30/18	05/30/18 22:22	WB
Chlorobenzene	ND		ug/m³	9.20	2.30	10	05/30/18	05/30/18 22:22	WB
Chloroethane	ND		ug/m³	5.30	2.65	10	05/30/18	05/30/18 22:22	WB
Chloroform	**14.2**		ug/m³	9.70	2.43	10	05/30/18	05/30/18 22:22	WB
Chloromethane	ND		ug/m³	4.10	1.03	10	05/30/18	05/30/18 22:22	WB
3-Chloropropene	ND		ug/m³	6.30	1.58	10	05/30/18	05/30/18 22:22	WB
Cyclohexane	ND		ug/m³	6.90	1.73	10	05/30/18	05/30/18 22:22	WB
Dibromochloromethane	ND		ug/m³	13.0	3.25	10	05/30/18	05/30/18 22:22	WB
1,2-Dibromoethane (EDB)	ND		ug/m³	14.0	3.50	10	05/30/18	05/30/18 22:22	WB
1,2-Dichlorobenzene	ND		ug/m³	12.0	3.00	10	05/30/18	05/30/18 22:22	WB
1,3-Dichlorobenzene	ND		ug/m³	12.0	3.00	10	05/30/18	05/30/18 22:22	WB
1,4-Dichlorobenzene	ND		ug/m³	12.0	3.00	10	05/30/18	05/30/18 22:22	WB
Dichlorodifluoromethane	ND		ug/m³	9.90	9.90	10	05/30/18	05/30/18 22:22	WB
1,1-Dichloroethane	ND		ug/m³	8.10	2.03	10	05/30/18	05/30/18 22:22	WB
1,2-Dichloroethane	ND		ug/m³	8.10	2.03	10	05/30/18	05/30/18 22:22	WB
1,1-Dichloroethene	ND		ug/m³	7.90	1.98	10	05/30/18	05/30/18 22:22	WB
cis-1,2-Dichloroethene	ND		ug/m³	7.90	1.98	10	05/30/18	05/30/18 22:22	WB
trans-1,2-Dichloroethene	ND		ug/m³	7.90	1.98	10	05/30/18	05/30/18 22:22	WB
1,2-Dichloropropane	ND		ug/m³	9.20	2.30	10	05/30/18	05/30/18 22:22	WB
cis-1,3-Dichloropropene	ND		ug/m³	9.10	2.28	10	05/30/18	05/30/18 22:22	WB
trans-1,3-Dichloropropene	ND		ug/m³	9.10	2.28	10	05/30/18	05/30/18 22:22	WB
1,4-Dioxane	ND		ug/m³	7.20	1.80	10	05/30/18	05/30/18 22:22	WB
Ethyl acetate	ND		ug/m³	36.0	36.0	10	05/30/18	05/30/18 22:22	WB
Ethylbenzene	ND		ug/m³	8.70	2.18	10	05/30/18	05/30/18 22:22	WB
4-Ethyltoluene	ND		ug/m³	9.80	2.45	10	05/30/18	05/30/18 22:22	WB
Freon 113	ND		ug/m³	15.0	3.75	10	05/30/18	05/30/18 22:22	WB

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: PHASE 2 SITE ASSESSMENT

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/06/18 10:01

VMP-01

8052901-01RE1 (Vapor)
Sample Date: 05/24/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD TO-15 (GC/MS) (continued)									
Freon 114	ND		ug/m³	14.0	14.0	10	05/30/18	05/30/18 22:22	WB
n-Heptane	ND		ug/m³	8.20	2.05	10	05/30/18	05/30/18 22:22	WB
Hexachlorobutadiene	ND		ug/m³	21.0	21.0	10	05/30/18	05/30/18 22:22	WB
Hexane	ND		ug/m³	140	140	10	05/30/18	05/30/18 22:22	WB
2-Hexanone	ND		ug/m³	8.20	1.48	10	05/30/18	05/30/18 22:22	WB
Isopropylbenzene (Cumene)	ND		ug/m³	11.0	4.00	10	05/30/18	05/30/18 22:22	WB
Methyl tert-butyl ether (MTBE)	ND		ug/m³	7.20	2.05	10	05/30/18	05/30/18 22:22	WB
Methylene chloride	ND		ug/m³	180	180	10	05/30/18	05/30/18 22:22	WB
Methyl ethyl ketone (2-Butanone)	ND		ug/m³	5.90	3.40	10	05/30/18	05/30/18 22:22	WB
Methyl isobutyl ketone	ND		ug/m³	8.20	2.13	10	05/30/18	05/30/18 22:22	WB
Naphthalene	ND		ug/m³	11.0	7.00	10	05/30/18	05/30/18 22:22	WB
Propene	ND		ug/m³	3.40	3.40	10	05/30/18	05/30/18 22:22	WB
n-Propylbenzene	ND		ug/m³	9.80	4.00	10	05/30/18	05/30/18 22:22	WB
Styrene	ND		ug/m³	8.50	1.48	10	05/30/18	05/30/18 22:22	WB
1,1,2,2-Tetrachloroethane	ND		ug/m³	14.0	3.50	10	05/30/18	05/30/18 22:22	WB
Tetrachloroethene	**691**		ug/m³	14.0	3.50	10	05/30/18	05/30/18 22:22	WB
Tetrahydrofuran	ND		ug/m³	5.90	1.48	10	05/30/18	05/30/18 22:22	WB
Toluene	ND		ug/m³	7.50	1.88	10	05/30/18	05/30/18 22:22	WB
1,2,4-Trichlorobenzene	ND		ug/m³	15.0	3.75	10	05/30/18	05/30/18 22:22	WB
1,1,1-Trichloroethane	ND		ug/m³	11.0	2.75	10	05/30/18	05/30/18 22:22	WB
1,1,2-Trichloroethane	ND		ug/m³	11.0	2.75	10	05/30/18	05/30/18 22:22	WB
Trichloroethene	**4.30**	J	ug/m³	11.0	2.75	10	05/30/18	05/30/18 22:22	WB
Trichlorofluoromethane (Freon 11)	ND		ug/m³	11.0	2.75	10	05/30/18	05/30/18 22:22	WB
1,2,4-Trimethylbenzene	ND		ug/m³	9.80	2.45	10	05/30/18	05/30/18 22:22	WB
1,3,5-Trimethylbenzene	ND		ug/m³	9.80	2.45	10	05/30/18	05/30/18 22:22	WB
2,2,4-Trimethylpentane	ND		ug/m³	9.30	2.33	10	05/30/18	05/30/18 22:22	WB
Vinyl acetate	ND		ug/m³	7.00	7.00	10	05/30/18	05/30/18 22:22	WB
Vinyl bromide	ND		ug/m³	8.70	2.18	10	05/30/18	05/30/18 22:22	WB
Vinyl chloride	ND		ug/m³	5.10	1.28	10	05/30/18	05/30/18 22:22	WB
o-Xylene	ND		ug/m³	8.70	2.18	10	05/30/18	05/30/18 22:22	WB
m- & p-Xylenes	ND		ug/m³	17.0	4.25	10	05/30/18	05/30/18 22:22	WB
Surrogate: 4-Bromofluorobenzene			*73-110*	*94 %*			*05/30/18*	*05/30/18 22:22*	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: PHASE 2 SITE ASSESSMENT

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/06/18 10:01

VMP-02

8052901-02 (Vapor)
Sample Date: 05/24/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD TO-15 (GC/MS)									
Acetone	**11.2**		ug/m³	9.60	9.60	4	05/30/18	05/30/18 18:13	WB
Benzene	ND		ug/m³	2.56	0.64	4	05/30/18	05/30/18 18:13	WB
Benzyl chloride	ND		ug/m³	4.00	1.00	4	05/30/18	05/30/18 18:13	WB
Bromodichloromethane	**4.82**	J	ug/m³	5.20	1.30	4	05/30/18	05/30/18 18:13	WB
Bromoform	ND		ug/m³	8.40	2.10	4	05/30/18	05/30/18 18:13	WB
Bromomethane	ND		ug/m³	3.12	0.78	4	05/30/18	05/30/18 18:13	WB
1,3-Butadiene	ND		ug/m³	1.76	1.76	4	05/30/18	05/30/18 18:13	WB
Carbon disulfide	**3.49**		ug/m³	2.48	0.62	4	05/30/18	05/30/18 18:13	WB
Carbon tetrachloride	ND		ug/m³	5.20	1.30	4	05/30/18	05/30/18 18:13	WB
Chlorobenzene	ND		ug/m³	3.68	0.92	4	05/30/18	05/30/18 18:13	WB
Chloroethane	ND		ug/m³	2.12	1.06	4	05/30/18	05/30/18 18:13	WB
Chloroform	**79.7**		ug/m³	3.88	0.97	4	05/30/18	05/30/18 18:13	WB
Chloromethane	ND		ug/m³	1.64	0.41	4	05/30/18	05/30/18 18:13	WB
3-Chloropropene	ND		ug/m³	2.52	0.63	4	05/30/18	05/30/18 18:13	WB
Cyclohexane	ND		ug/m³	2.76	0.69	4	05/30/18	05/30/18 18:13	WB
Dibromochloromethane	ND		ug/m³	5.20	1.30	4	05/30/18	05/30/18 18:13	WB
1,2-Dibromoethane (EDB)	ND		ug/m³	5.60	1.40	4	05/30/18	05/30/18 18:13	WB
1,2-Dichlorobenzene	ND		ug/m³	4.80	1.20	4	05/30/18	05/30/18 18:13	WB
1,3-Dichlorobenzene	ND		ug/m³	4.80	1.20	4	05/30/18	05/30/18 18:13	WB
1,4-Dichlorobenzene	ND		ug/m³	4.80	1.20	4	05/30/18	05/30/18 18:13	WB
Dichlorodifluoromethane	ND		ug/m³	3.96	3.96	4	05/30/18	05/30/18 18:13	WB
1,1-Dichloroethane	ND		ug/m³	3.24	0.81	4	05/30/18	05/30/18 18:13	WB
1,2-Dichloroethane	ND		ug/m³	3.24	0.81	4	05/30/18	05/30/18 18:13	WB
1,1-Dichloroethene	ND		ug/m³	3.16	0.79	4	05/30/18	05/30/18 18:13	WB
cis-1,2-Dichloroethene	ND		ug/m³	3.16	0.79	4	05/30/18	05/30/18 18:13	WB
trans-1,2-Dichloroethene	ND		ug/m³	3.16	0.79	4	05/30/18	05/30/18 18:13	WB
1,2-Dichloropropane	ND		ug/m³	3.68	0.92	4	05/30/18	05/30/18 18:13	WB
cis-1,3-Dichloropropene	ND		ug/m³	3.64	0.91	4	05/30/18	05/30/18 18:13	WB
trans-1,3-Dichloropropene	ND		ug/m³	3.64	0.91	4	05/30/18	05/30/18 18:13	WB
1,4-Dioxane	ND		ug/m³	2.88	0.72	4	05/30/18	05/30/18 18:13	WB
Ethyl acetate	ND		ug/m³	14.4	14.4	4	05/30/18	05/30/18 18:13	WB
Ethylbenzene	ND		ug/m³	3.48	0.87	4	05/30/18	05/30/18 18:13	WB
4-Ethyltoluene	ND		ug/m³	3.92	0.98	4	05/30/18	05/30/18 18:13	WB
Freon 113	ND		ug/m³	6.00	1.50	4	05/30/18	05/30/18 18:13	WB

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Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: PHASE 2 SITE ASSESSMENT

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/06/18 10:01

VMP-02

8052901-02 (Vapor)
Sample Date: 05/24/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD TO-15 (GC/MS) (continued)									
Freon 114	ND		ug/m³	5.60	5.60	4	05/30/18	05/30/18 18:13	WB
n-Heptane	ND		ug/m³	3.28	0.82	4	05/30/18	05/30/18 18:13	WB
Hexachlorobutadiene	ND		ug/m³	8.40	8.40	4	05/30/18	05/30/18 18:13	WB
Hexane	ND		ug/m³	56.0	56.0	4	05/30/18	05/30/18 18:13	WB
2-Hexanone	ND		ug/m³	3.28	0.59	4	05/30/18	05/30/18 18:13	WB
Isopropylbenzene (Cumene)	ND		ug/m³	4.40	1.60	4	05/30/18	05/30/18 18:13	WB
Methyl tert-butyl ether (MTBE)	ND		ug/m³	2.88	0.82	4	05/30/18	05/30/18 18:13	WB
Methylene chloride	ND		ug/m³	72.0	72.0	4	05/30/18	05/30/18 18:13	WB
Methyl ethyl ketone (2-Butanone)	ND		ug/m³	2.36	1.36	4	05/30/18	05/30/18 18:13	WB
Methyl isobutyl ketone	ND		ug/m³	3.28	0.85	4	05/30/18	05/30/18 18:13	WB
Naphthalene	ND		ug/m³	4.40	2.80	4	05/30/18	05/30/18 18:13	WB
Propene	ND		ug/m³	1.36	1.36	4	05/30/18	05/30/18 18:13	WB
n-Propylbenzene	ND		ug/m³	3.92	1.60	4	05/30/18	05/30/18 18:13	WB
Styrene	ND		ug/m³	3.40	0.59	4	05/30/18	05/30/18 18:13	WB
1,1,2,2-Tetrachloroethane	ND		ug/m³	5.60	1.40	4	05/30/18	05/30/18 18:13	WB
Tetrachloroethene	**268**		ug/m³	5.60	1.40	4	05/30/18	05/30/18 18:13	WB
Tetrahydrofuran	ND		ug/m³	2.36	0.59	4	05/30/18	05/30/18 18:13	WB
Toluene	ND		ug/m³	3.00	0.75	4	05/30/18	05/30/18 18:13	WB
1,2,4-Trichlorobenzene	ND		ug/m³	6.00	1.50	4	05/30/18	05/30/18 18:13	WB
1,1,1-Trichloroethane	ND		ug/m³	4.40	1.10	4	05/30/18	05/30/18 18:13	WB
1,1,2-Trichloroethane	ND		ug/m³	4.40	1.10	4	05/30/18	05/30/18 18:13	WB
Trichloroethene	**3.44**	J	ug/m³	4.40	1.10	4	05/30/18	05/30/18 18:13	WB
Trichlorofluoromethane (Freon 11)	**2.47**	J	ug/m³	4.40	1.10	4	05/30/18	05/30/18 18:13	WB
1,2,4-Trimethylbenzene	ND		ug/m³	3.92	0.98	4	05/30/18	05/30/18 18:13	WB
1,3,5-Trimethylbenzene	ND		ug/m³	3.92	0.98	4	05/30/18	05/30/18 18:13	WB
2,2,4-Trimethylpentane	ND		ug/m³	3.72	0.93	4	05/30/18	05/30/18 18:13	WB
Vinyl acetate	ND		ug/m³	2.80	2.80	4	05/30/18	05/30/18 18:13	WB
Vinyl bromide	ND		ug/m³	3.48	0.87	4	05/30/18	05/30/18 18:13	WB
Vinyl chloride	ND		ug/m³	2.04	0.51	4	05/30/18	05/30/18 18:13	WB
o-Xylene	ND		ug/m³	3.48	0.87	4	05/30/18	05/30/18 18:13	WB
m- & p-Xylenes	ND		ug/m³	6.80	1.70	4	05/30/18	05/30/18 18:13	WB
Surrogate: 4-Bromofluorobenzene			*73-110*	*88 %*			*05/30/18*	*05/30/18 18:13*	

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Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: PHASE 2 SITE ASSESSMENT

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/06/18 10:01

VMP-04

8052901-03 (Vapor)
Sample Date: 05/24/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD TO-15 (GC/MS)									
Acetone	ND		ug/m³	9.60	9.60	4	05/30/18	05/30/18 18:50	WB
Benzene	ND		ug/m³	2.56	0.64	4	05/30/18	05/30/18 18:50	WB
Benzyl chloride	ND		ug/m³	4.00	1.00	4	05/30/18	05/30/18 18:50	WB
Bromodichloromethane	ND		ug/m³	5.20	1.30	4	05/30/18	05/30/18 18:50	WB
Bromoform	ND		ug/m³	8.40	2.10	4	05/30/18	05/30/18 18:50	WB
Bromomethane	ND		ug/m³	3.12	0.78	4	05/30/18	05/30/18 18:50	WB
1,3-Butadiene	ND		ug/m³	1.76	1.76	4	05/30/18	05/30/18 18:50	WB
Carbon disulfide	ND		ug/m³	2.48	0.62	4	05/30/18	05/30/18 18:50	WB
Carbon tetrachloride	ND		ug/m³	5.20	1.30	4	05/30/18	05/30/18 18:50	WB
Chlorobenzene	ND		ug/m³	3.68	0.92	4	05/30/18	05/30/18 18:50	WB
Chloroethane	ND		ug/m³	2.12	1.06	4	05/30/18	05/30/18 18:50	WB
Chloroform	ND		ug/m³	3.88	0.97	4	05/30/18	05/30/18 18:50	WB
Chloromethane	ND		ug/m³	1.64	0.41	4	05/30/18	05/30/18 18:50	WB
3-Chloropropene	ND		ug/m³	2.52	0.63	4	05/30/18	05/30/18 18:50	WB
Cyclohexane	ND		ug/m³	2.76	0.69	4	05/30/18	05/30/18 18:50	WB
Dibromochloromethane	ND		ug/m³	5.20	1.30	4	05/30/18	05/30/18 18:50	WB
1,2-Dibromoethane (EDB)	ND		ug/m³	5.60	1.40	4	05/30/18	05/30/18 18:50	WB
1,2-Dichlorobenzene	ND		ug/m³	4.80	1.20	4	05/30/18	05/30/18 18:50	WB
1,3-Dichlorobenzene	ND		ug/m³	4.80	1.20	4	05/30/18	05/30/18 18:50	WB
1,4-Dichlorobenzene	ND		ug/m³	4.80	1.20	4	05/30/18	05/30/18 18:50	WB
Dichlorodifluoromethane	ND		ug/m³	3.96	3.96	4	05/30/18	05/30/18 18:50	WB
1,1-Dichloroethane	ND		ug/m³	3.24	0.81	4	05/30/18	05/30/18 18:50	WB
1,2-Dichloroethane	ND		ug/m³	3.24	0.81	4	05/30/18	05/30/18 18:50	WB
1,1-Dichloroethene	ND		ug/m³	3.16	0.79	4	05/30/18	05/30/18 18:50	WB
cis-1,2-Dichloroethene	ND		ug/m³	3.16	0.79	4	05/30/18	05/30/18 18:50	WB
trans-1,2-Dichloroethene	ND		ug/m³	3.16	0.79	4	05/30/18	05/30/18 18:50	WB
1,2-Dichloropropane	ND		ug/m³	3.68	0.92	4	05/30/18	05/30/18 18:50	WB
cis-1,3-Dichloropropene	ND		ug/m³	3.64	0.91	4	05/30/18	05/30/18 18:50	WB
trans-1,3-Dichloropropene	ND		ug/m³	3.64	0.91	4	05/30/18	05/30/18 18:50	WB
1,4-Dioxane	ND		ug/m³	2.88	0.72	4	05/30/18	05/30/18 18:50	WB
Ethyl acetate	ND		ug/m³	14.4	14.4	4	05/30/18	05/30/18 18:50	WB
Ethylbenzene	ND		ug/m³	3.48	0.87	4	05/30/18	05/30/18 18:50	WB
4-Ethyltoluene	ND		ug/m³	3.92	0.98	4	05/30/18	05/30/18 18:50	WB
Freon 113	ND		ug/m³	6.00	1.50	4	05/30/18	05/30/18 18:50	WB

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: PHASE 2 SITE ASSESSMENT

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/06/18 10:01

VMP-04

8052901-03 (Vapor)
Sample Date: 05/24/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD TO-15 (GC/MS) (continued)									
Freon 114	ND		ug/m³	5.60	5.60	4	05/30/18	05/30/18 18:50	WB
n-Heptane	ND		ug/m³	3.28	0.82	4	05/30/18	05/30/18 18:50	WB
Hexachlorobutadiene	ND		ug/m³	8.40	8.40	4	05/30/18	05/30/18 18:50	WB
Hexane	ND		ug/m³	56.0	56.0	4	05/30/18	05/30/18 18:50	WB
2-Hexanone	ND		ug/m³	3.28	0.59	4	05/30/18	05/30/18 18:50	WB
Isopropylbenzene (Cumene)	ND		ug/m³	4.40	1.60	4	05/30/18	05/30/18 18:50	WB
Methyl tert-butyl ether (MTBE)	ND		ug/m³	2.88	0.82	4	05/30/18	05/30/18 18:50	WB
Methylene chloride	ND		ug/m³	72.0	72.0	4	05/30/18	05/30/18 18:50	WB
Methyl ethyl ketone (2-Butanone)	ND		ug/m³	2.36	1.36	4	05/30/18	05/30/18 18:50	WB
Methyl isobutyl ketone	ND		ug/m³	3.28	0.85	4	05/30/18	05/30/18 18:50	WB
Naphthalene	ND		ug/m³	4.40	2.80	4	05/30/18	05/30/18 18:50	WB
Propene	ND		ug/m³	1.36	1.36	4	05/30/18	05/30/18 18:50	WB
n-Propylbenzene	ND		ug/m³	3.92	1.60	4	05/30/18	05/30/18 18:50	WB
Styrene	ND		ug/m³	3.40	0.59	4	05/30/18	05/30/18 18:50	WB
1,1,2,2-Tetrachloroethane	ND		ug/m³	5.60	1.40	4	05/30/18	05/30/18 18:50	WB
Tetrachloroethene	**9.22**		ug/m³	5.60	1.40	4	05/30/18	05/30/18 18:50	WB
Tetrahydrofuran	ND		ug/m³	2.36	0.59	4	05/30/18	05/30/18 18:50	WB
Toluene	ND		ug/m³	3.00	0.75	4	05/30/18	05/30/18 18:50	WB
1,2,4-Trichlorobenzene	ND		ug/m³	6.00	1.50	4	05/30/18	05/30/18 18:50	WB
1,1,1-Trichloroethane	ND		ug/m³	4.40	1.10	4	05/30/18	05/30/18 18:50	WB
1,1,2-Trichloroethane	ND		ug/m³	4.40	1.10	4	05/30/18	05/30/18 18:50	WB
Trichloroethene	ND		ug/m³	4.40	1.10	4	05/30/18	05/30/18 18:50	WB
Trichlorofluoromethane (Freon 11)	**2.70**	J	ug/m³	4.40	1.10	4	05/30/18	05/30/18 18:50	WB
1,2,4-Trimethylbenzene	ND		ug/m³	3.92	0.98	4	05/30/18	05/30/18 18:50	WB
1,3,5-Trimethylbenzene	ND		ug/m³	3.92	0.98	4	05/30/18	05/30/18 18:50	WB
2,2,4-Trimethylpentane	ND		ug/m³	3.72	0.93	4	05/30/18	05/30/18 18:50	WB
Vinyl acetate	ND		ug/m³	2.80	2.80	4	05/30/18	05/30/18 18:50	WB
Vinyl bromide	ND		ug/m³	3.48	0.87	4	05/30/18	05/30/18 18:50	WB
Vinyl chloride	ND		ug/m³	2.04	0.51	4	05/30/18	05/30/18 18:50	WB
o-Xylene	ND		ug/m³	3.48	0.87	4	05/30/18	05/30/18 18:50	WB
m- & p-Xylenes	ND		ug/m³	6.80	1.70	4	05/30/18	05/30/18 18:50	WB
Surrogate: 4-Bromofluorobenzene			*73-110*	*89 %*			*05/30/18*	*05/30/18 18:50*	

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Rabecka Koons, Quality Assurance Officer

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: PHASE 2 SITE ASSESSMENT

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/06/18 10:01

VMP-05

8052901-04 (Vapor)
Sample Date: 05/24/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD TO-15 (GC/MS)									
Acetone	ND		ug/m³	9.60	9.60	4	05/30/18	05/30/18 19:26	WB
Benzene	ND		ug/m³	2.56	0.64	4	05/30/18	05/30/18 19:26	WB
Benzyl chloride	ND		ug/m³	4.00	1.00	4	05/30/18	05/30/18 19:26	WB
Bromodichloromethane	ND		ug/m³	5.20	1.30	4	05/30/18	05/30/18 19:26	WB
Bromoform	ND		ug/m³	8.40	2.10	4	05/30/18	05/30/18 19:26	WB
Bromomethane	ND		ug/m³	3.12	0.78	4	05/30/18	05/30/18 19:26	WB
1,3-Butadiene	ND		ug/m³	1.76	1.76	4	05/30/18	05/30/18 19:26	WB
Carbon disulfide	ND		ug/m³	2.48	0.62	4	05/30/18	05/30/18 19:26	WB
Carbon tetrachloride	ND		ug/m³	5.20	1.30	4	05/30/18	05/30/18 19:26	WB
Chlorobenzene	ND		ug/m³	3.68	0.92	4	05/30/18	05/30/18 19:26	WB
Chloroethane	ND		ug/m³	2.12	1.06	4	05/30/18	05/30/18 19:26	WB
Chloroform	ND		ug/m³	3.88	0.97	4	05/30/18	05/30/18 19:26	WB
Chloromethane	ND		ug/m³	1.64	0.41	4	05/30/18	05/30/18 19:26	WB
3-Chloropropene	ND		ug/m³	2.52	0.63	4	05/30/18	05/30/18 19:26	WB
Cyclohexane	ND		ug/m³	2.76	0.69	4	05/30/18	05/30/18 19:26	WB
Dibromochloromethane	ND		ug/m³	5.20	1.30	4	05/30/18	05/30/18 19:26	WB
1,2-Dibromoethane (EDB)	ND		ug/m³	5.60	1.40	4	05/30/18	05/30/18 19:26	WB
1,2-Dichlorobenzene	ND		ug/m³	4.80	1.20	4	05/30/18	05/30/18 19:26	WB
1,3-Dichlorobenzene	ND		ug/m³	4.80	1.20	4	05/30/18	05/30/18 19:26	WB
1,4-Dichlorobenzene	ND		ug/m³	4.80	1.20	4	05/30/18	05/30/18 19:26	WB
Dichlorodifluoromethane	ND		ug/m³	3.96	3.96	4	05/30/18	05/30/18 19:26	WB
1,1-Dichloroethane	ND		ug/m³	3.24	0.81	4	05/30/18	05/30/18 19:26	WB
1,2-Dichloroethane	ND		ug/m³	3.24	0.81	4	05/30/18	05/30/18 19:26	WB
1,1-Dichloroethene	ND		ug/m³	3.16	0.79	4	05/30/18	05/30/18 19:26	WB
cis-1,2-Dichloroethene	ND		ug/m³	3.16	0.79	4	05/30/18	05/30/18 19:26	WB
trans-1,2-Dichloroethene	ND		ug/m³	3.16	0.79	4	05/30/18	05/30/18 19:26	WB
1,2-Dichloropropane	ND		ug/m³	3.68	0.92	4	05/30/18	05/30/18 19:26	WB
cis-1,3-Dichloropropene	ND		ug/m³	3.64	0.91	4	05/30/18	05/30/18 19:26	WB
trans-1,3-Dichloropropene	ND		ug/m³	3.64	0.91	4	05/30/18	05/30/18 19:26	WB
1,4-Dioxane	ND		ug/m³	2.88	0.72	4	05/30/18	05/30/18 19:26	WB
Ethyl acetate	ND		ug/m³	14.4	14.4	4	05/30/18	05/30/18 19:26	WB
Ethylbenzene	ND		ug/m³	3.48	0.87	4	05/30/18	05/30/18 19:26	WB
4-Ethyltoluene	ND		ug/m³	3.92	0.98	4	05/30/18	05/30/18 19:26	WB
Freon 113	ND		ug/m³	6.00	1.50	4	05/30/18	05/30/18 19:26	WB

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Project: PHASE 2 SITE ASSESSMENT

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/06/18 10:01

VMP-05

8052901-04 (Vapor)
Sample Date: 05/24/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD TO-15 (GC/MS) (continued)									
Freon 114	ND		ug/m³	5.60	5.60	4	05/30/18	05/30/18 19:26	WB
n-Heptane	ND		ug/m³	3.28	0.82	4	05/30/18	05/30/18 19:26	WB
Hexachlorobutadiene	ND		ug/m³	8.40	8.40	4	05/30/18	05/30/18 19:26	WB
Hexane	ND		ug/m³	56.0	56.0	4	05/30/18	05/30/18 19:26	WB
2-Hexanone	ND		ug/m³	3.28	0.59	4	05/30/18	05/30/18 19:26	WB
Isopropylbenzene (Cumene)	ND		ug/m³	4.40	1.60	4	05/30/18	05/30/18 19:26	WB
Methyl tert-butyl ether (MTBE)	ND		ug/m³	2.88	0.82	4	05/30/18	05/30/18 19:26	WB
Methylene chloride	ND		ug/m³	72.0	72.0	4	05/30/18	05/30/18 19:26	WB
Methyl ethyl ketone (2-Butanone)	ND		ug/m³	2.36	1.36	4	05/30/18	05/30/18 19:26	WB
Methyl isobutyl ketone	ND		ug/m³	3.28	0.85	4	05/30/18	05/30/18 19:26	WB
Naphthalene	ND		ug/m³	4.40	2.80	4	05/30/18	05/30/18 19:26	WB
Propene	ND		ug/m³	1.36	1.36	4	05/30/18	05/30/18 19:26	WB
n-Propylbenzene	ND		ug/m³	3.92	1.60	4	05/30/18	05/30/18 19:26	WB
Styrene	ND		ug/m³	3.40	0.59	4	05/30/18	05/30/18 19:26	WB
1,1,2,2-Tetrachloroethane	ND		ug/m³	5.60	1.40	4	05/30/18	05/30/18 19:26	WB
Tetrachloroethene	**14.1**		ug/m³	5.60	1.40	4	05/30/18	05/30/18 19:26	WB
Tetrahydrofuran	ND		ug/m³	2.36	0.59	4	05/30/18	05/30/18 19:26	WB
Toluene	ND		ug/m³	3.00	0.75	4	05/30/18	05/30/18 19:26	WB
1,2,4-Trichlorobenzene	ND		ug/m³	6.00	1.50	4	05/30/18	05/30/18 19:26	WB
1,1,1-Trichloroethane	ND		ug/m³	4.40	1.10	4	05/30/18	05/30/18 19:26	WB
1,1,2-Trichloroethane	ND		ug/m³	4.40	1.10	4	05/30/18	05/30/18 19:26	WB
Trichloroethene	ND		ug/m³	4.40	1.10	4	05/30/18	05/30/18 19:26	WB
Trichlorofluoromethane (Freon 11)	**2.70**	J	ug/m³	4.40	1.10	4	05/30/18	05/30/18 19:26	WB
1,2,4-Trimethylbenzene	ND		ug/m³	3.92	0.98	4	05/30/18	05/30/18 19:26	WB
1,3,5-Trimethylbenzene	ND		ug/m³	3.92	0.98	4	05/30/18	05/30/18 19:26	WB
2,2,4-Trimethylpentane	ND		ug/m³	3.72	0.93	4	05/30/18	05/30/18 19:26	WB
Vinyl acetate	ND		ug/m³	2.80	2.80	4	05/30/18	05/30/18 19:26	WB
Vinyl bromide	ND		ug/m³	3.48	0.87	4	05/30/18	05/30/18 19:26	WB
Vinyl chloride	ND		ug/m³	2.04	0.51	4	05/30/18	05/30/18 19:26	WB
o-Xylene	ND		ug/m³	3.48	0.87	4	05/30/18	05/30/18 19:26	WB
m- & p-Xylenes	ND		ug/m³	6.80	1.70	4	05/30/18	05/30/18 19:26	WB
Surrogate: 4-Bromofluorobenzene			*73-110*	*84 %*			*05/30/18*	*05/30/18 19:26*	

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Rabecka Koons, Quality Assurance Officer

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Analytical Results

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Project: PHASE 2 SITE ASSESSMENT

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/06/18 10:01

VMP-06

8052901-05RE1 (Vapor)
Sample Date: 05/24/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD TO-15 (GC/MS)									
Acetone	ND		ug/m³	48.0	48.0	20	05/30/18	05/30/18 22:58	WB
Benzene	ND		ug/m³	12.8	3.20	20	05/30/18	05/30/18 22:58	WB
Benzyl chloride	ND		ug/m³	20.0	5.00	20	05/30/18	05/30/18 22:58	WB
Bromodichloromethane	ND		ug/m³	26.0	6.50	20	05/30/18	05/30/18 22:58	WB
Bromoform	ND		ug/m³	42.0	10.5	20	05/30/18	05/30/18 22:58	WB
Bromomethane	ND		ug/m³	15.6	3.90	20	05/30/18	05/30/18 22:58	WB
1,3-Butadiene	ND		ug/m³	8.80	8.80	20	05/30/18	05/30/18 22:58	WB
Carbon disulfide	ND		ug/m³	12.4	3.10	20	05/30/18	05/30/18 22:58	WB
Carbon tetrachloride	ND		ug/m³	26.0	6.50	20	05/30/18	05/30/18 22:58	WB
Chlorobenzene	ND		ug/m³	18.4	4.60	20	05/30/18	05/30/18 22:58	WB
Chloroethane	ND		ug/m³	10.6	5.30	20	05/30/18	05/30/18 22:58	WB
Chloroform	ND		ug/m³	19.4	4.85	20	05/30/18	05/30/18 22:58	WB
Chloromethane	ND		ug/m³	8.20	2.05	20	05/30/18	05/30/18 22:58	WB
3-Chloropropene	ND		ug/m³	12.6	3.15	20	05/30/18	05/30/18 22:58	WB
Cyclohexane	ND		ug/m³	13.8	3.45	20	05/30/18	05/30/18 22:58	WB
Dibromochloromethane	ND		ug/m³	26.0	6.50	20	05/30/18	05/30/18 22:58	WB
1,2-Dibromoethane (EDB)	ND		ug/m³	28.0	7.00	20	05/30/18	05/30/18 22:58	WB
1,2-Dichlorobenzene	ND		ug/m³	24.0	6.00	20	05/30/18	05/30/18 22:58	WB
1,3-Dichlorobenzene	ND		ug/m³	24.0	6.00	20	05/30/18	05/30/18 22:58	WB
1,4-Dichlorobenzene	ND		ug/m³	24.0	6.00	20	05/30/18	05/30/18 22:58	WB
Dichlorodifluoromethane	ND		ug/m³	19.8	19.8	20	05/30/18	05/30/18 22:58	WB
1,1-Dichloroethane	ND		ug/m³	16.2	4.05	20	05/30/18	05/30/18 22:58	WB
1,2-Dichloroethane	ND		ug/m³	16.2	4.05	20	05/30/18	05/30/18 22:58	WB
1,1-Dichloroethene	ND		ug/m³	15.8	3.95	20	05/30/18	05/30/18 22:58	WB
cis-1,2-Dichloroethene	ND		ug/m³	15.8	3.95	20	05/30/18	05/30/18 22:58	WB
trans-1,2-Dichloroethene	ND		ug/m³	15.8	3.95	20	05/30/18	05/30/18 22:58	WB
1,2-Dichloropropane	ND		ug/m³	18.4	4.60	20	05/30/18	05/30/18 22:58	WB
cis-1,3-Dichloropropene	ND		ug/m³	18.2	4.55	20	05/30/18	05/30/18 22:58	WB
trans-1,3-Dichloropropene	ND		ug/m³	18.2	4.55	20	05/30/18	05/30/18 22:58	WB
1,4-Dioxane	ND		ug/m³	14.4	3.60	20	05/30/18	05/30/18 22:58	WB
Ethyl acetate	ND		ug/m³	72.0	72.0	20	05/30/18	05/30/18 22:58	WB
Ethylbenzene	ND		ug/m³	17.4	4.35	20	05/30/18	05/30/18 22:58	WB
4-Ethyltoluene	ND		ug/m³	19.6	4.90	20	05/30/18	05/30/18 22:58	WB
Freon 113	ND		ug/m³	30.0	7.50	20	05/30/18	05/30/18 22:58	WB

Rebecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

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Project: PHASE 2 SITE ASSESSMENT

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/06/18 10:01

VMP-06

8052901-05RE1 (Vapor)
Sample Date: 05/24/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD TO-15 (GC/MS) (continued)									
Freon 114	ND		ug/m³	28.0	28.0	20	05/30/18	05/30/18 22:58	WB
n-Heptane	ND		ug/m³	16.4	4.10	20	05/30/18	05/30/18 22:58	WB
Hexachlorobutadiene	ND		ug/m³	42.0	42.0	20	05/30/18	05/30/18 22:58	WB
Hexane	ND		ug/m³	280	280	20	05/30/18	05/30/18 22:58	WB
2-Hexanone	ND		ug/m³	16.4	2.95	20	05/30/18	05/30/18 22:58	WB
Isopropylbenzene (Cumene)	ND		ug/m³	22.0	8.00	20	05/30/18	05/30/18 22:58	WB
Methyl tert-butyl ether (MTBE)	ND		ug/m³	14.4	4.10	20	05/30/18	05/30/18 22:58	WB
Methylene chloride	ND		ug/m³	360	360	20	05/30/18	05/30/18 22:58	WB
Methyl ethyl ketone (2-Butanone)	ND		ug/m³	11.8	6.80	20	05/30/18	05/30/18 22:58	WB
Methyl isobutyl ketone	ND		ug/m³	16.4	4.25	20	05/30/18	05/30/18 22:58	WB
Naphthalene	ND		ug/m³	22.0	14.0	20	05/30/18	05/30/18 22:58	WB
Propene	ND		ug/m³	6.80	6.80	20	05/30/18	05/30/18 22:58	WB
n-Propylbenzene	ND		ug/m³	19.6	8.00	20	05/30/18	05/30/18 22:58	WB
Styrene	ND		ug/m³	17.0	2.95	20	05/30/18	05/30/18 22:58	WB
1,1,2,2-Tetrachloroethane	ND		ug/m³	28.0	7.00	20	05/30/18	05/30/18 22:58	WB
Tetrachloroethene	**3350**		ug/m³	28.0	7.00	20	05/30/18	05/30/18 22:58	WB
Tetrahydrofuran	ND		ug/m³	11.8	2.95	20	05/30/18	05/30/18 22:58	WB
Toluene	ND		ug/m³	15.0	3.75	20	05/30/18	05/30/18 22:58	WB
1,2,4-Trichlorobenzene	ND		ug/m³	30.0	7.50	20	05/30/18	05/30/18 22:58	WB
1,1,1-Trichloroethane	ND		ug/m³	22.0	5.50	20	05/30/18	05/30/18 22:58	WB
1,1,2-Trichloroethane	ND		ug/m³	22.0	5.50	20	05/30/18	05/30/18 22:58	WB
Trichloroethene	ND		ug/m³	22.0	5.50	20	05/30/18	05/30/18 22:58	WB
Trichlorofluoromethane (Freon 11)	ND		ug/m³	22.0	5.50	20	05/30/18	05/30/18 22:58	WB
1,2,4-Trimethylbenzene	ND		ug/m³	19.6	4.90	20	05/30/18	05/30/18 22:58	WB
1,3,5-Trimethylbenzene	ND		ug/m³	19.6	4.90	20	05/30/18	05/30/18 22:58	WB
2,2,4-Trimethylpentane	ND		ug/m³	18.6	4.65	20	05/30/18	05/30/18 22:58	WB
Vinyl acetate	ND		ug/m³	14.0	14.0	20	05/30/18	05/30/18 22:58	WB
Vinyl bromide	ND		ug/m³	17.4	4.35	20	05/30/18	05/30/18 22:58	WB
Vinyl chloride	ND		ug/m³	10.2	2.55	20	05/30/18	05/30/18 22:58	WB
o-Xylene	ND		ug/m³	17.4	4.35	20	05/30/18	05/30/18 22:58	WB
m- & p-Xylenes	ND		ug/m³	34.0	8.50	20	05/30/18	05/30/18 22:58	WB
Surrogate: 4-Bromofluorobenzene			*73-110*	*91 %*			*05/30/18*	*05/30/18 22:58*	

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Rabecka Koons, Quality Assurance Officer

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Project: PHASE 2 SITE ASSESSMENT

Project Number: CG-17-1111

Project Manager: Nancy Love

Reported:
06/06/18 10:01

Notes and Definitions

J	Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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Rabecka Koons, Quality Assurance Officer

Maryland Spectral Services
1500 Caton Ctr Dr Suite G
Baltimore MD 21227
410-247-7600

Air Analysis by TO-15

Chain of Custody

Client Contact Information	**Project Manager: Nancy love**	Carrier: Client	1 of 1 COCs
Company: Chesapeake GeoSciences	Phone: 410-745-1911 Ext 106	Samplers Name(s) Devin Glancey	
Address: 5405 Twin Knolls Rd. Suite	Site Contact: Meg Staines	Devin Glancey	
City/State/Zip Columbia, MD 21045	(443)745-4214		
Phone: 410-745-1911			
FAX: 410-745-3200			
Project Name: Phase II Site Assessment	**Analysis Turnaround Time**		
Site: Armed Forces Retirement Home	Standard (Specify) X		
PO # CG171111MS	Rush (Specify)_____		

Client Sample ID	Sample Date(s)	Time Start (24 hr clock)	Time Stop (24 hr clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Incoming Canister Pressure ("Hg) (Lab)	Sample Regulator ID	Can ID	Can Size (L)		Analysis/ Matrix: TO-15 FULL LIST Low Level	TO-15 ABREVIATED LIST	Indoor / Ambient Air	Soil Gas / Subslab	Comments
VMP-01	5/24/18	07:36	15:40	~37.0	5.0		4755	17329	6		X			X	8052901-01
VMP-02	5/24/18	07:26	15:30	32.0	5.0		4686	MSS063	6		X			X	-02
[redacted]															
VMP-04	5/24/18	07:57	15:59	31.0	2.5		4709	MSS023	6		X			X	-03
VMP-05	5/24/18	09:15	17:50	32.0	4.5		4502	MSS047	6		X			X	-04
VMP-06	5/24/18	07:46	15:48	32.0	5.0		3607	MSS042	6		X			X	-05
[redacted]															
															* Canisters + regulators flagged w/ orange flagging were used at locations with water interference / vacuum issues, DO NOT ANALYZE *

Special Instructions/QC Requirements & Comments:
Canisters provided: ☑ (all pressures checked on ☑ to be >30" vac.)
Samplers provided: ☑ 8hr Comp in 6.0L can

Canisters Shipped by:	Date/Time:	Canisters Received by:	Date/Time:
Samples Relinquished by:	Date/Time: 5/24/18 16:21	Received by:	Date/Time: 5/24/18 16:21
Relinquished by:	Date/Time: 5/29/18 10:10	Received by:	Date/Time: 5/29/18 10:10

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
VELAP ID 460040

26 June 2018

Nancy Love
Chesapeake GeoSciences, Inc.
5405 Twin Knolls Rd, Suite 1
Columbia, MD 21045
RE: ARMED FORCES RETIREMENT HOME

Enclosed are the results of analyses for samples received by the laboratory on 06/15/18 08:02.

A more detailed report format is available upon request, which lists the accreditation status for all analytical methods performed.

Please visit our website at www.mdspectral.com for a complete listing of our accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Rabecka Koons
Quality Assurance Officer

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/26/18 12:14

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
VMP-03		8061501-01	Vapor	06/13/18 19:35	06/15/18 08:02

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Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/26/18 12:14

VMP-03

8061501-01RE1 (Vapor)
Sample Date: 06/13/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD TO-15 (GC/MS)									
Acetone	**24.9**		ug/m³	4.80	4.80	2	06/21/18	06/21/18 16:49	WB
Benzene	**1.02**	J	ug/m³	1.28	0.32	2	06/21/18	06/21/18 16:49	WB
Benzyl chloride	ND		ug/m³	2.00	0.50	2	06/21/18	06/21/18 16:49	WB
Bromodichloromethane	ND		ug/m³	2.60	0.65	2	06/21/18	06/21/18 16:49	WB
Bromoform	ND		ug/m³	4.20	1.05	2	06/21/18	06/21/18 16:49	WB
Bromomethane	ND		ug/m³	1.56	0.39	2	06/21/18	06/21/18 16:49	WB
1,3-Butadiene	ND		ug/m³	0.88	0.88	2	06/21/18	06/21/18 16:49	WB
Carbon disulfide	**2.43**		ug/m³	1.24	0.31	2	06/21/18	06/21/18 16:49	WB
Carbon tetrachloride	ND		ug/m³	2.60	0.65	2	06/21/18	06/21/18 16:49	WB
Chlorobenzene	ND		ug/m³	1.84	0.46	2	06/21/18	06/21/18 16:49	WB
Chloroethane	ND		ug/m³	1.06	0.53	2	06/21/18	06/21/18 16:49	WB
Chloroform	**1.17**	J	ug/m³	1.94	0.49	2	06/21/18	06/21/18 16:49	WB
Chloromethane	ND		ug/m³	0.82	0.21	2	06/21/18	06/21/18 16:49	WB
3-Chloropropene	ND		ug/m³	1.26	0.32	2	06/21/18	06/21/18 16:49	WB
Cyclohexane	ND		ug/m³	1.38	0.35	2	06/21/18	06/21/18 16:49	WB
Dibromochloromethane	ND		ug/m³	2.60	0.65	2	06/21/18	06/21/18 16:49	WB
1,2-Dibromoethane (EDB)	ND		ug/m³	2.80	0.70	2	06/21/18	06/21/18 16:49	WB
1,2-Dichlorobenzene	ND		ug/m³	2.40	0.60	2	06/21/18	06/21/18 16:49	WB
1,3-Dichlorobenzene	ND		ug/m³	2.40	0.60	2	06/21/18	06/21/18 16:49	WB
1,4-Dichlorobenzene	ND		ug/m³	2.40	0.60	2	06/21/18	06/21/18 16:49	WB
Dichlorodifluoromethane	**2.77**		ug/m³	1.98	1.98	2	06/21/18	06/21/18 16:49	WB
1,1-Dichloroethane	ND		ug/m³	1.62	0.41	2	06/21/18	06/21/18 16:49	WB
1,2-Dichloroethane	ND		ug/m³	1.62	0.41	2	06/21/18	06/21/18 16:49	WB
1,1-Dichloroethene	ND		ug/m³	1.58	0.40	2	06/21/18	06/21/18 16:49	WB
cis-1,2-Dichloroethene	ND		ug/m³	1.58	0.40	2	06/21/18	06/21/18 16:49	WB
trans-1,2-Dichloroethene	ND		ug/m³	1.58	0.40	2	06/21/18	06/21/18 16:49	WB
1,2-Dichloropropane	ND		ug/m³	1.84	0.46	2	06/21/18	06/21/18 16:49	WB
cis-1,3-Dichloropropene	ND		ug/m³	1.82	0.46	2	06/21/18	06/21/18 16:49	WB
trans-1,3-Dichloropropene	ND		ug/m³	1.82	0.46	2	06/21/18	06/21/18 16:49	WB
1,4-Dioxane	ND		ug/m³	1.44	0.36	2	06/21/18	06/21/18 16:49	WB
Ethyl acetate	ND		ug/m³	7.20	7.20	2	06/21/18	06/21/18 16:49	WB
Ethylbenzene	ND		ug/m³	1.74	0.44	2	06/21/18	06/21/18 16:49	WB
4-Ethyltoluene	ND		ug/m³	1.96	0.49	2	06/21/18	06/21/18 16:49	WB
Freon 113	ND		ug/m³	3.00	0.75	2	06/21/18	06/21/18 16:49	WB

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Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/26/18 12:14

VMP-03

8061501-01RE1 (Vapor)
Sample Date: 06/13/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD TO-15 (GC/MS) (continued)									
Freon 114	ND		ug/m³	2.80	2.80	2	06/21/18	06/21/18 16:49	WB
n-Heptane	**0.49**	J	ug/m³	1.64	0.41	2	06/21/18	06/21/18 16:49	WB
Hexachlorobutadiene	ND		ug/m³	4.20	4.20	2	06/21/18	06/21/18 16:49	WB
Hexane	ND		ug/m³	28.0	28.0	2	06/21/18	06/21/18 16:49	WB
2-Hexanone	**0.41**	J	ug/m³	1.64	0.30	2	06/21/18	06/21/18 16:49	WB
Isopropylbenzene (Cumene)	ND		ug/m³	2.20	0.80	2	06/21/18	06/21/18 16:49	WB
Methyl tert-butyl ether (MTBE)	ND		ug/m³	1.44	0.41	2	06/21/18	06/21/18 16:49	WB
Methylene chloride	ND		ug/m³	36.0	36.0	2	06/21/18	06/21/18 16:49	WB
Methyl ethyl ketone (2-Butanone)	**18.9**		ug/m³	1.18	0.68	2	06/21/18	06/21/18 16:49	WB
Methyl isobutyl ketone	ND		ug/m³	1.64	0.43	2	06/21/18	06/21/18 16:49	WB
Naphthalene	ND		ug/m³	2.20	1.40	2	06/21/18	06/21/18 16:49	WB
Propene	ND		ug/m³	0.68	0.68	2	06/21/18	06/21/18 16:49	WB
n-Propylbenzene	ND		ug/m³	1.96	0.80	2	06/21/18	06/21/18 16:49	WB
Styrene	ND		ug/m³	1.70	0.30	2	06/21/18	06/21/18 16:49	WB
1,1,2,2-Tetrachloroethane	ND		ug/m³	2.80	0.70	2	06/21/18	06/21/18 16:49	WB
Tetrachloroethene	**319**		ug/m³	2.80	1.40	2	06/21/18	06/21/18 16:49	WB
Tetrahydrofuran	**3.36**		ug/m³	1.18	0.30	2	06/21/18	06/21/18 16:49	WB
Toluene	**0.60**	J	ug/m³	1.50	0.38	2	06/21/18	06/21/18 16:49	WB
1,2,4-Trichlorobenzene	ND		ug/m³	3.00	0.75	2	06/21/18	06/21/18 16:49	WB
1,1,1-Trichloroethane	ND		ug/m³	2.20	0.55	2	06/21/18	06/21/18 16:49	WB
1,1,2-Trichloroethane	ND		ug/m³	2.20	0.55	2	06/21/18	06/21/18 16:49	WB
Trichloroethene	**0.97**	J	ug/m³	2.20	0.55	2	06/21/18	06/21/18 16:49	WB
Trichlorofluoromethane (Freon 11)	**2.02**	J	ug/m³	2.20	0.55	2	06/21/18	06/21/18 16:49	WB
1,2,4-Trimethylbenzene	ND		ug/m³	1.96	0.49	2	06/21/18	06/21/18 16:49	WB
1,3,5-Trimethylbenzene	ND		ug/m³	1.96	0.49	2	06/21/18	06/21/18 16:49	WB
2,2,4-Trimethylpentane	ND		ug/m³	1.86	0.47	2	06/21/18	06/21/18 16:49	WB
Vinyl acetate	ND		ug/m³	1.40	1.40	2	06/21/18	06/21/18 16:49	WB
Vinyl bromide	ND		ug/m³	1.74	0.44	2	06/21/18	06/21/18 16:49	WB
Vinyl chloride	ND		ug/m³	1.02	0.26	2	06/21/18	06/21/18 16:49	WB
o-Xylene	ND		ug/m³	1.74	0.44	2	06/21/18	06/21/18 16:49	WB
m- & p-Xylenes	ND		ug/m³	3.40	0.85	2	06/21/18	06/21/18 16:49	WB
Surrogate: 4-Bromofluorobenzene			*73-110*	*81 %*			*06/21/18*	*06/21/18 16:49*	

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Rabecka Koons, Quality Assurance Officer

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1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
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Analytical Results

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/26/18 12:14

Notes and Definitions

L	Analyte is a possible laboratory contaminant
J	Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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Rabecka Koons, Quality Assurance Officer

Air Analysis by TO-15

Chain of Custody

Client Contact Information	Project Manager: Nancy Love	Carrier: Client	1 of 1 COCs
Company: Chesapeake Geo Sciences	Phone: (410)740-1911 X106	Samplers Name(s): Devin Glenney, Meg Staines	Analysis/ Matrix
5405 Twin Knolls Rd Ste 1	Site Contact: Meg Staines		
Columbia, MD 21045	(443)745-4214		
(410)740-1911 X106			
(410)740-3299			
Project Name: Phase II ESA	Analysis Turnaround Time		
Site: Armed Forces Retirement Home	Standard (Specify) X		
PO # CG171111MS	Rush (Specify)		

Client Sample ID	Sample Date Start	Time Start (24 hr clock)	Sample Date Stop	Time Stop (24 hr clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Incoming Canister Pressure ("Hg) (Lab)	Sample Regulator ID	Can ID	Can Size (L)	TO-15 FULL LIST Low Level	TO-15 ABREVIATED LIST	Indoor / Ambient Air	Soil Gas / Subslab	Comments
VMP-03	6/13/18	07:14	6/13/18	19:35	31	7	6	04752	M5067	6	X				Contains moisture *
VMP-03	↓	07:14	↓	19:35	30	25.5		04745	M5020	6	X				Contains moisture **
															Extra volume if needed for VMP-03

8061501-01 A

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:	Date/Time:
Samples Relinquished by: Devin Glenney	Date/Time: 6/15/18 8:02	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

APPENDIX O

BUILDING 46 – GROUNDWATER SAMPLE LABORATORY ANALYTICAL REPORTS

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
VELAP ID 460040

REV2. Original report ID 8051713 05 29 18 1550

03 July 2018

Nancy Love
Chesapeake GeoSciences, Inc.
5405 Twin Knolls Rd, Suite 1
Columbia, MD 21045
RE: ARMED FORCES RETIREMENT HOME

Enclosed are the results of analyses for samples received by the laboratory on 05/17/18 13:45.

A more detailed report format is available upon request, which lists the accreditation status for all analytical methods performed.

Please visit our website at www.mdspectral.com for a complete listing of our accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Sam Hamner
Senior Chemist

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
07/03/18 13:36

REV2. Original report ID 8051713 05 29 18 1550

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W46-3 (23-28')		8051713-01	Nonpotable Water	05/14/18 08:30	05/17/18 13:45
AFRH-TB-1		8051713-02	Nonpotable Water	05/14/18 06:00	05/17/18 13:45

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Sam Hamner, Senior Chemist

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Analytical Results

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410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
07/03/18 13:36

REV2. Original report ID 8051713 05 29 18 1550

W46-3 (23-28')

8051713-01 (Nonpotable Water)
Sample Date: 05/14/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	10.0	10.0	1	05/17/18	05/17/18 18:49	GM
tert-Amyl alcohol (TAA)	ND		ug/L	20.0	20.0	1	05/17/18	05/17/18 18:49	GM
tert-Amyl methyl ether (TAME)	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Benzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Bromobenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Bromochloromethane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Bromodichloromethane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Bromoform	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Bromomethane	ND		ug/L	5.0	5.0	1	05/17/18	05/17/18 18:49	GM
tert-Butanol (TBA)	ND		ug/L	15.0	15.0	1	05/17/18	05/17/18 18:49	GM
2-Butanone (MEK)	ND		ug/L	10.0	10.0	1	05/17/18	05/17/18 18:49	GM
n-Butylbenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
sec-Butylbenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
tert-Butylbenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Carbon disulfide	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Carbon tetrachloride	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Chlorobenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Chloroethane	ND		ug/L	5.0	5.0	1	05/17/18	05/17/18 18:49	GM
Chloroform	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Chloromethane	ND		ug/L	5.0	5.0	1	05/17/18	05/17/18 18:49	GM
2-Chlorotoluene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
4-Chlorotoluene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Dibromochloromethane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
1,2-Dibromoethane (EDB)	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Dibromomethane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
1,2-Dichlorobenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
1,3-Dichlorobenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
1,4-Dichlorobenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Dichlorodifluoromethane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
1,1-Dichloroethane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
1,2-Dichloroethane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
1,1-Dichloroethene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
cis-1,2-Dichloroethene	**3.4**	J	ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM

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Sam Hamner, Senior Chemist

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
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Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
07/03/18 13:36

REV2. Original report ID 8051713 05 29 18 1550

W46-3 (23-28')

8051713-01 (Nonpotable Water)
Sample Date: 05/14/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
trans-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Dichlorofluoromethane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
1,2-Dichloropropane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
1,3-Dichloropropane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
2,2-Dichloropropane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
1,1-Dichloropropene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
cis-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
trans-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Diisopropyl ether (DIPE)	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Ethyl tert-butyl ether (ETBE)	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Ethylbenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Hexachlorobutadiene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
2-Hexanone	ND		ug/L	10.0	10.0	1	05/17/18	05/17/18 18:49	GM
Isopropylbenzene (Cumene)	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
4-Isopropyltoluene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
4-Methyl-2-pentanone	ND		ug/L	10.0	10.0	1	05/17/18	05/17/18 18:49	GM
Methylene chloride	ND		ug/L	10.0	10.0	1	05/17/18	05/17/18 18:49	GM
Naphthalene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
n-Propylbenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Styrene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Tetrachloroethene	**10.7**		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Toluene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
1,2,3-Trichlorobenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
1,2,4-Trichlorobenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
1,1,1-Trichloroethane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
1,1,2-Trichloroethane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Trichloroethene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
1,2,3-Trichloropropane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
1,2,4-Trimethylbenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
1,3,5-Trimethylbenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM

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Sam Hamner, Senior Chemist

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Analytical Results

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Baltimore MD 21227
410-247-7600
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Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
07/03/18 13:36

REV2. Original report ID 8051713 05 29 18 1550

W46-3 (23-28')

8051713-01 (Nonpotable Water)
Sample Date: 05/14/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
Vinyl chloride	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
o-Xylene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
m- & p-Xylenes	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 18:49	GM
Surrogate: 1,2-Dichloroethane-d4			*75-120*	*103 %*		*05/17/18*		*05/17/18 18:49*	
Surrogate: Toluene-d8			*84-110*	*99 %*		*05/17/18*		*05/17/18 18:49*	
Surrogate: 4-Bromofluorobenzene			*78-110*	*102 %*		*05/17/18*		*05/17/18 18:49*	
GASOLINE RANGE ORGANICS BY EPA 8015B									
C7-C12	ND		ug/L	500	500	1	05/25/18	05/25/18 20:01	GM
Surrogate: a,a,a-Trifluorotoluene			*85-115*	*96 %*		*05/25/18*		*05/25/18 20:01*	

Sam Hamner, Senior Chemist

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As a NELAP accredited laboratory, MSS can provide a certification list upon request.

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
07/03/18 13:36

REV2. Original report ID 8051713 05 29 18 1550

AFRH-TB-1

8051713-02 (Nonpotable Water)
Sample Date: 05/14/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	10.0	10.0	1	05/17/18	05/17/18 19:13	GM
tert-Amyl alcohol (TAA)	ND		ug/L	20.0	20.0	1	05/17/18	05/17/18 19:13	GM
tert-Amyl methyl ether (TAME)	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Benzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Bromobenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Bromochloromethane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Bromodichloromethane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Bromoform	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Bromomethane	ND		ug/L	5.0	5.0	1	05/17/18	05/17/18 19:13	GM
tert-Butanol (TBA)	ND		ug/L	15.0	15.0	1	05/17/18	05/17/18 19:13	GM
2-Butanone (MEK)	ND		ug/L	10.0	10.0	1	05/17/18	05/17/18 19:13	GM
n-Butylbenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
sec-Butylbenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
tert-Butylbenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Carbon disulfide	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Carbon tetrachloride	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Chlorobenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Chloroethane	ND		ug/L	5.0	5.0	1	05/17/18	05/17/18 19:13	GM
Chloroform	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Chloromethane	ND		ug/L	5.0	5.0	1	05/17/18	05/17/18 19:13	GM
2-Chlorotoluene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
4-Chlorotoluene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Dibromochloromethane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
1,2-Dibromoethane (EDB)	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Dibromomethane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
1,2-Dichlorobenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
1,3-Dichlorobenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
1,4-Dichlorobenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Dichlorodifluoromethane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
1,1-Dichloroethane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
1,2-Dichloroethane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
1,1-Dichloroethene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
cis-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM

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Sam Hamner, Senior Chemist

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
07/03/18 13:36

REV2. Original report ID 8051713 05 29 18 1550

AFRH-TB-1

8051713-02 (Nonpotable Water)
Sample Date: 05/14/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
trans-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Dichlorofluoromethane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
1,2-Dichloropropane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
1,3-Dichloropropane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
2,2-Dichloropropane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
1,1-Dichloropropene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
cis-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
trans-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Diisopropyl ether (DIPE)	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Ethyl tert-butyl ether (ETBE)	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Ethylbenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Hexachlorobutadiene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
2-Hexanone	ND		ug/L	10.0	10.0	1	05/17/18	05/17/18 19:13	GM
Isopropylbenzene (Cumene)	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
4-Isopropyltoluene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
4-Methyl-2-pentanone	ND		ug/L	10.0	10.0	1	05/17/18	05/17/18 19:13	GM
Methylene chloride	ND		ug/L	10.0	10.0	1	05/17/18	05/17/18 19:13	GM
Naphthalene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
n-Propylbenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Styrene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Tetrachloroethene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Toluene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
1,2,3-Trichlorobenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
1,2,4-Trichlorobenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
1,1,1-Trichloroethane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
1,1,2-Trichloroethane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Trichloroethene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
1,2,3-Trichloropropane	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
1,2,4-Trimethylbenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
1,3,5-Trimethylbenzene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM

Sam Hamner, Senior Chemist

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
07/03/18 13:36

REV2. Original report ID 8051713 05 29 18 1550

AFRH-TB-1

8051713-02 (Nonpotable Water)
Sample Date: 05/14/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
Vinyl chloride	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
o-Xylene	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
m- & p-Xylenes	ND		ug/L	5.0	2.0	1	05/17/18	05/17/18 19:13	GM
Surrogate: 1,2-Dichloroethane-d4			*75-120*	*103 %*			*05/17/18*	*05/17/18 19:13*	
Surrogate: Toluene-d8			*84-110*	*100 %*			*05/17/18*	*05/17/18 19:13*	
Surrogate: 4-Bromofluorobenzene			*78-110*	*101 %*			*05/17/18*	*05/17/18 19:13*	

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Sam Hamner, Senior Chemist

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
07/03/18 13:36

REV2. Original report ID 8051713 05 29 18 1550

Notes and Definitions

J	Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Sam Hamner, Senior Chemist

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CHAIN-OF-CUSTODY RECORD

Company Name: Chesapeake GeoSciences, Inc.	Project Manager: Nancy Love
Project Name: Armed Forces Retirement Home	Project ID: CG-17-1111
Sampler(s): Meg Staines	P.O. Number: CG171111MS

Maryland Spectral Services, Inc.
1500 Caton Center Drive, Suite G
Baltimore, MD 21227
410–247–7600 • Fax 410–247–7602
labman@mdspectral.com

Matrix Codes: NW (nonpotable water)
PW (potable water)

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	VOCs EPA 8260	PAHs EPA 8270	TPH-GRO EPA 8015M	TPH-DRO EPA 8015M	TPH-ORO EPA 8015M	RCRA 8 Metals EPA 6020	PCBs EPA 8082	TPH-C7-12 EPA 8015M		Preservative: 1+1 HCL, H_2SO_4, Methanol, $Na_2S_2O_3$, $NaHCO_3$	Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank	MSS Lab ID
W46-3 (23-28')	5/14/18	08:30	X			6	X							X		HCl pH<2		8051713-01
AFRH-TB-1	5/14/18	06:00	X			2	X							X		HCl pH<2	Trip Blank	↓ -02

Relinquished by: (Signature) / (Printed)	Date/Time	Received by: (Signature) / (Printed)	Relinquished by: (Signature) / (Printed)	Date/Time	Received by: (Signature) / (Printed)
Meg Staines	05/16/18 17:00	UPS			
Relinquished by: (Signature) / (Printed)	Date/Time	Received by Lab: (Signature) / (Printed)			
	1345 5/17/18	Samantha Khan			

Turn Around Time:

- [X] Normal (7 day)
- [ ] 5 day
- [ ] 4 day
- [ ] 3 day
- [ ] Rush (2 day)
- [ ] Next Day
- [ ] Other: _____
- [ ] Specific Due Date: _____

Lab Use:

Temp: 4.6 °C
- [✓] Received on Ice
- [ ] Received same day
- [ ] Preservation Appropriate

Sample Disposal:

- [ ] Return to Client
- [ ] Disposal by lab
- [X] Archive for 7 days

Delivery Method:

- [ ] Courier
- [X] UPS
- [ ] FedEx
- [ ] USPS
- [ ] Other: _____

Special Instructions/QC Requirements & Comments:

REV2. Original report ID 8051713 05 29 18 1550

MSS-F001-03/13

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
VELAP ID 460040

18 June 2018

Nancy Love
Chesapeake GeoSciences, Inc.
5405 Twin Knolls Rd, Suite 1
Columbia, MD 21045
RE: ARMED FORCES RETIREMENT HOME

Enclosed are the results of analyses for samples received by the laboratory on 06/07/18 15:05.

A more detailed report format is available upon request, which lists the accreditation status for all analytical methods performed.

Please visit our website at www.mdspectral.com for a complete listing of our accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Sam Hamner
Senior Chemist

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-TB		8060711-01	Nonpotable Water	06/05/18 06:40	06/07/18 15:05
W72-1		8060711-02	Nonpotable Water	06/06/18 08:55	06/07/18 15:05
W71-1		8060711-03	Nonpotable Water	06/06/18 11:10	06/07/18 15:05
W46-2		8060711-04	Nonpotable Water	06/06/18 14:10	06/07/18 15:05
MW-ERB		8060711-05	Nonpotable Water	06/06/18 15:30	06/07/18 15:05
MW-D		8060711-06	Nonpotable Water	06/06/18 00:00	06/07/18 15:05
W71-2		8060711-07	Nonpotable Water	06/07/18 09:45	06/07/18 15:05
W46-3		8060711-08	Nonpotable Water	06/07/18 11:25	06/07/18 15:05

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Sam Hamner, Senior Chemist

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

MW-TB

8060711-01 (Nonpotable Water)
Sample Date: 06/05/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 18:57	GM
tert-Amyl alcohol (TAA)	ND		ug/L	20.0	20.0	1	06/12/18	06/12/18 18:57	GM
tert-Amyl methyl ether (TAME)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Benzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Bromobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Bromochloromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Bromodichloromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Bromoform	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Bromomethane	ND		ug/L	5.0	5.0	1	06/12/18	06/12/18 18:57	GM
tert-Butanol (TBA)	ND		ug/L	15.0	15.0	1	06/12/18	06/12/18 18:57	GM
2-Butanone (MEK)	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 18:57	GM
n-Butylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
sec-Butylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
tert-Butylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Carbon disulfide	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Carbon tetrachloride	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Chlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Chloroethane	ND		ug/L	5.0	5.0	1	06/12/18	06/12/18 18:57	GM
Chloroform	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Chloromethane	ND		ug/L	5.0	5.0	1	06/12/18	06/12/18 18:57	GM
2-Chlorotoluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
4-Chlorotoluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Dibromochloromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
1,2-Dibromoethane (EDB)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Dibromomethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
1,2-Dichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
1,3-Dichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
1,4-Dichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Dichlorodifluoromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
1,1-Dichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
1,2-Dichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
1,1-Dichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
cis-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM

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Sam Hamner, Senior Chemist

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

MW-TB

8060711-01 (Nonpotable Water)
Sample Date: 06/05/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
trans-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Dichlorofluoromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
1,2-Dichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
1,3-Dichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
2,2-Dichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
1,1-Dichloropropene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
cis-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
trans-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Diisopropyl ether (DIPE)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Ethyl tert-butyl ether (ETBE)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Ethylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Hexachlorobutadiene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
2-Hexanone	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 18:57	GM
Isopropylbenzene (Cumene)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
4-Isopropyltoluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
4-Methyl-2-pentanone	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 18:57	GM
Methylene chloride	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 18:57	GM
Naphthalene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
n-Propylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Styrene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Tetrachloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Toluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
1,2,3-Trichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
1,2,4-Trichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
1,1,1-Trichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
1,1,2-Trichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Trichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
1,2,3-Trichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
1,2,4-Trimethylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
1,3,5-Trimethylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM

Sam Hamner, Senior Chemist

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

MW-TB

8060711-01 (Nonpotable Water)
Sample Date: 06/05/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
Vinyl chloride	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
o-Xylene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
m- & p-Xylenes	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 18:57	GM
Surrogate: 1,2-Dichloroethane-d4			*75-120*	*99 %*		*06/12/18*		*06/12/18 18:57*	
Surrogate: Toluene-d8			*84-110*	*98 %*		*06/12/18*		*06/12/18 18:57*	
Surrogate: 4-Bromofluorobenzene			*78-110*	*98 %*		*06/12/18*		*06/12/18 18:57*	

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Sam Hamner, Senior Chemist

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

W72-1

8060711-02 (Nonpotable Water)
Sample Date: 06/06/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 19:21	GM
tert-Amyl alcohol (TAA)	ND		ug/L	20.0	20.0	1	06/12/18	06/12/18 19:21	GM
tert-Amyl methyl ether (TAME)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Benzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Bromobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Bromochloromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Bromodichloromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Bromoform	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Bromomethane	ND		ug/L	5.0	5.0	1	06/12/18	06/12/18 19:21	GM
tert-Butanol (TBA)	ND		ug/L	15.0	15.0	1	06/12/18	06/12/18 19:21	GM
2-Butanone (MEK)	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 19:21	GM
n-Butylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
sec-Butylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
tert-Butylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Carbon disulfide	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Carbon tetrachloride	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Chlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Chloroethane	ND		ug/L	5.0	5.0	1	06/12/18	06/12/18 19:21	GM
Chloroform	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Chloromethane	ND		ug/L	5.0	5.0	1	06/12/18	06/12/18 19:21	GM
2-Chlorotoluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
4-Chlorotoluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Dibromochloromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
1,2-Dibromoethane (EDB)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Dibromomethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
1,2-Dichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
1,3-Dichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
1,4-Dichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Dichlorodifluoromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
1,1-Dichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
1,2-Dichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
1,1-Dichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
cis-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM

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Sam Hamner, Senior Chemist

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

W72-1

8060711-02 (Nonpotable Water)
Sample Date: 06/06/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
trans-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Dichlorofluoromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
1,2-Dichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
1,3-Dichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
2,2-Dichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
1,1-Dichloropropene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
cis-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
trans-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Diisopropyl ether (DIPE)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Ethyl tert-butyl ether (ETBE)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Ethylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Hexachlorobutadiene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
2-Hexanone	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 19:21	GM
Isopropylbenzene (Cumene)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
4-Isopropyltoluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
4-Methyl-2-pentanone	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 19:21	GM
Methylene chloride	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 19:21	GM
Naphthalene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
n-Propylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Styrene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Tetrachloroethene	**2.4**	J	ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Toluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
1,2,3-Trichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
1,2,4-Trichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
1,1,1-Trichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
1,1,2-Trichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Trichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
1,2,3-Trichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
1,2,4-Trimethylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
1,3,5-Trimethylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM

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Sam Hamner, Senior Chemist

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

W72-1

8060711-02 (Nonpotable Water)
Sample Date: 06/06/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
Vinyl chloride	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
o-Xylene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
m- & p-Xylenes	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:21	GM
Surrogate: 1,2-Dichloroethane-d4			*75-120*	*99 %*	*06/12/18*		*06/12/18 19:21*		
Surrogate: Toluene-d8			*84-110*	*99 %*	*06/12/18*		*06/12/18 19:21*		
Surrogate: 4-Bromofluorobenzene			*78-110*	*100 %*	*06/12/18*		*06/12/18 19:21*		
GASOLINE RANGE ORGANICS BY EPA 8015B									
C7-C12	ND		ug/L	500	500	1	06/15/18	06/15/18 14:47	GM
Surrogate: a,a,a-Trifluorotoluene			*85-115*	*94 %*	*06/15/18*		*06/15/18 14:47*		

Sam Hamner, Senior Chemist

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

W71-1

8060711-03 (Nonpotable Water)
Sample Date: 06/06/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 19:44	GM
tert-Amyl alcohol (TAA)	ND		ug/L	20.0	20.0	1	06/12/18	06/12/18 19:44	GM
tert-Amyl methyl ether (TAME)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Benzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Bromobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Bromochloromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Bromodichloromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Bromoform	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Bromomethane	ND		ug/L	5.0	5.0	1	06/12/18	06/12/18 19:44	GM
tert-Butanol (TBA)	ND		ug/L	15.0	15.0	1	06/12/18	06/12/18 19:44	GM
2-Butanone (MEK)	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 19:44	GM
n-Butylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
sec-Butylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
tert-Butylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Carbon disulfide	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Carbon tetrachloride	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Chlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Chloroethane	ND		ug/L	5.0	5.0	1	06/12/18	06/12/18 19:44	GM
Chloroform	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Chloromethane	ND		ug/L	5.0	5.0	1	06/12/18	06/12/18 19:44	GM
2-Chlorotoluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
4-Chlorotoluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Dibromochloromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
1,2-Dibromoethane (EDB)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Dibromomethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
1,2-Dichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
1,3-Dichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
1,4-Dichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Dichlorodifluoromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
1,1-Dichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
1,2-Dichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
1,1-Dichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
cis-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM

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Sam Hamner, Senior Chemist

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

W71-1

8060711-03 (Nonpotable Water)
Sample Date: 06/06/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
trans-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Dichlorofluoromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
1,2-Dichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
1,3-Dichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
2,2-Dichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
1,1-Dichloropropene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
cis-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
trans-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Diisopropyl ether (DIPE)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Ethyl tert-butyl ether (ETBE)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Ethylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Hexachlorobutadiene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
2-Hexanone	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 19:44	GM
Isopropylbenzene (Cumene)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
4-Isopropyltoluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
4-Methyl-2-pentanone	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 19:44	GM
Methylene chloride	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 19:44	GM
Naphthalene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
n-Propylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Styrene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Tetrachloroethene	**2.1**	J	ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Toluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
1,2,3-Trichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
1,2,4-Trichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
1,1,1-Trichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
1,1,2-Trichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Trichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
1,2,3-Trichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
1,2,4-Trimethylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
1,3,5-Trimethylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM

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Sam Hamner, Senior Chemist

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

W71-1

8060711-03 (Nonpotable Water)
Sample Date: 06/06/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
Vinyl chloride	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
o-Xylene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
m- & p-Xylenes	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 19:44	GM
Surrogate: 1,2-Dichloroethane-d4			*75-120*	*98 %*	*06/12/18*		*06/12/18 19:44*		
Surrogate: Toluene-d8			*84-110*	*98 %*	*06/12/18*		*06/12/18 19:44*		
Surrogate: 4-Bromofluorobenzene			*78-110*	*99 %*	*06/12/18*		*06/12/18 19:44*		
GASOLINE RANGE ORGANICS BY EPA 8015B									
C7-C12	ND		ug/L	500	500	1	06/15/18	06/15/18 15:24	GM
Surrogate: a,a,a-Trifluorotoluene			*85-115*	*94 %*	*06/15/18*		*06/15/18 15:24*		

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Analytical Results

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www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

W46-2

8060711-04 (Nonpotable Water)
Sample Date: 06/06/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 20:08	GM
tert-Amyl alcohol (TAA)	ND		ug/L	20.0	20.0	1	06/12/18	06/12/18 20:08	GM
tert-Amyl methyl ether (TAME)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Benzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Bromobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Bromochloromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Bromodichloromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Bromoform	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Bromomethane	ND		ug/L	5.0	5.0	1	06/12/18	06/12/18 20:08	GM
tert-Butanol (TBA)	ND		ug/L	15.0	15.0	1	06/12/18	06/12/18 20:08	GM
2-Butanone (MEK)	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 20:08	GM
n-Butylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
sec-Butylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
tert-Butylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Carbon disulfide	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Carbon tetrachloride	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Chlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Chloroethane	ND		ug/L	5.0	5.0	1	06/12/18	06/12/18 20:08	GM
Chloroform	**9.6**		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Chloromethane	ND		ug/L	5.0	5.0	1	06/12/18	06/12/18 20:08	GM
2-Chlorotoluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
4-Chlorotoluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Dibromochloromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
1,2-Dibromoethane (EDB)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Dibromomethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
1,2-Dichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
1,3-Dichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
1,4-Dichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Dichlorodifluoromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
1,1-Dichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
1,2-Dichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
1,1-Dichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
cis-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM

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Sam Hamner, Senior Chemist

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Analytical Results

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

W46-2

8060711-04 (Nonpotable Water)
Sample Date: 06/06/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
trans-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Dichlorofluoromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
1,2-Dichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
1,3-Dichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
2,2-Dichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
1,1-Dichloropropene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
cis-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
trans-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Diisopropyl ether (DIPE)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Ethyl tert-butyl ether (ETBE)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Ethylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Hexachlorobutadiene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
2-Hexanone	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 20:08	GM
Isopropylbenzene (Cumene)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
4-Isopropyltoluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
4-Methyl-2-pentanone	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 20:08	GM
Methylene chloride	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 20:08	GM
Naphthalene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
n-Propylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Styrene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Tetrachloroethene	**4.4**	J	ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Toluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
1,2,3-Trichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
1,2,4-Trichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
1,1,1-Trichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
1,1,2-Trichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Trichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
1,2,3-Trichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
1,2,4-Trimethylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
1,3,5-Trimethylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM

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Analytical Results

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Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

W46-2

8060711-04 (Nonpotable Water)
Sample Date: 06/06/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
Vinyl chloride	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
o-Xylene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
m- & p-Xylenes	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:08	GM
Surrogate: 1,2-Dichloroethane-d4			*75-120*	*98 %*	*06/12/18*		*06/12/18 20:08*		
Surrogate: Toluene-d8			*84-110*	*98 %*	*06/12/18*		*06/12/18 20:08*		
Surrogate: 4-Bromofluorobenzene			*78-110*	*99 %*	*06/12/18*		*06/12/18 20:08*		
GASOLINE RANGE ORGANICS BY EPA 8015B									
C7-C12	ND		ug/L	500	500	1	06/15/18	06/15/18 16:00	GM
Surrogate: a,a,a-Trifluorotoluene			*85-115*	*95 %*	*06/15/18*		*06/15/18 16:00*		

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Analytical Results

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Baltimore MD 21227
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Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

MW-ERB

8060711-05 (Nonpotable Water)
Sample Date: 06/06/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 20:31	GM
tert-Amyl alcohol (TAA)	ND		ug/L	20.0	20.0	1	06/12/18	06/12/18 20:31	GM
tert-Amyl methyl ether (TAME)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Benzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Bromobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Bromochloromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Bromodichloromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Bromoform	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Bromomethane	ND		ug/L	5.0	5.0	1	06/12/18	06/12/18 20:31	GM
tert-Butanol (TBA)	ND		ug/L	15.0	15.0	1	06/12/18	06/12/18 20:31	GM
2-Butanone (MEK)	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 20:31	GM
n-Butylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
sec-Butylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
tert-Butylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Carbon disulfide	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Carbon tetrachloride	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Chlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Chloroethane	ND		ug/L	5.0	5.0	1	06/12/18	06/12/18 20:31	GM
Chloroform	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Chloromethane	ND		ug/L	5.0	5.0	1	06/12/18	06/12/18 20:31	GM
2-Chlorotoluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
4-Chlorotoluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Dibromochloromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
1,2-Dibromoethane (EDB)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Dibromomethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
1,2-Dichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
1,3-Dichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
1,4-Dichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Dichlorodifluoromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
1,1-Dichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
1,2-Dichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
1,1-Dichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
cis-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM

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Analytical Results

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Baltimore MD 21227
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Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

MW-ERB

8060711-05 (Nonpotable Water)
Sample Date: 06/06/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
trans-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Dichlorofluoromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
1,2-Dichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
1,3-Dichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
2,2-Dichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
1,1-Dichloropropene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
cis-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
trans-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Diisopropyl ether (DIPE)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Ethyl tert-butyl ether (ETBE)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Ethylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Hexachlorobutadiene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
2-Hexanone	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 20:31	GM
Isopropylbenzene (Cumene)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
4-Isopropyltoluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
4-Methyl-2-pentanone	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 20:31	GM
Methylene chloride	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 20:31	GM
Naphthalene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
n-Propylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Styrene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Tetrachloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Toluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
1,2,3-Trichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
1,2,4-Trichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
1,1,1-Trichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
1,1,2-Trichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Trichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
1,2,3-Trichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
1,2,4-Trimethylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
1,3,5-Trimethylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM

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Sam Hamner, Senior Chemist

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

MW-ERB

8060711-05 (Nonpotable Water)
Sample Date: 06/06/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
Vinyl chloride	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
o-Xylene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
m- & p-Xylenes	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:31	GM
Surrogate: 1,2-Dichloroethane-d4			*75-120*	*101 %*			*06/12/18*	*06/12/18 20:31*	
Surrogate: Toluene-d8			*84-110*	*99 %*			*06/12/18*	*06/12/18 20:31*	
Surrogate: 4-Bromofluorobenzene			*78-110*	*99 %*			*06/12/18*	*06/12/18 20:31*	

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

MW-D

8060711-06 (Nonpotable Water)
Sample Date: 06/06/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 20:55	GM
tert-Amyl alcohol (TAA)	ND		ug/L	20.0	20.0	1	06/12/18	06/12/18 20:55	GM
tert-Amyl methyl ether (TAME)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Benzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Bromobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Bromochloromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Bromodichloromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Bromoform	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Bromomethane	ND		ug/L	5.0	5.0	1	06/12/18	06/12/18 20:55	GM
tert-Butanol (TBA)	ND		ug/L	15.0	15.0	1	06/12/18	06/12/18 20:55	GM
2-Butanone (MEK)	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 20:55	GM
n-Butylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
sec-Butylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
tert-Butylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Carbon disulfide	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Carbon tetrachloride	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Chlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Chloroethane	ND		ug/L	5.0	5.0	1	06/12/18	06/12/18 20:55	GM
Chloroform	**9.5**		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Chloromethane	ND		ug/L	5.0	5.0	1	06/12/18	06/12/18 20:55	GM
2-Chlorotoluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
4-Chlorotoluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Dibromochloromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
1,2-Dibromoethane (EDB)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Dibromomethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
1,2-Dichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
1,3-Dichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
1,4-Dichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Dichlorodifluoromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
1,1-Dichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
1,2-Dichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
1,1-Dichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
cis-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM

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Sam Hamner, Senior Chemist

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

MW-D

8060711-06 (Nonpotable Water)
Sample Date: 06/06/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
trans-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Dichlorofluoromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
1,2-Dichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
1,3-Dichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
2,2-Dichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
1,1-Dichloropropene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
cis-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
trans-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Diisopropyl ether (DIPE)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Ethyl tert-butyl ether (ETBE)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Ethylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Hexachlorobutadiene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
2-Hexanone	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 20:55	GM
Isopropylbenzene (Cumene)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
4-Isopropyltoluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
4-Methyl-2-pentanone	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 20:55	GM
Methylene chloride	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 20:55	GM
Naphthalene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
n-Propylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Styrene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Tetrachloroethene	**4.5**	J	ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Toluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
1,2,3-Trichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
1,2,4-Trichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
1,1,1-Trichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
1,1,2-Trichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Trichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
1,2,3-Trichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
1,2,4-Trimethylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
1,3,5-Trimethylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

MW-D

8060711-06 (Nonpotable Water)
Sample Date: 06/06/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
Vinyl chloride	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
o-Xylene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
m- & p-Xylenes	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 20:55	GM
Surrogate: 1,2-Dichloroethane-d4			*75-120*	*101 %*			*06/12/18*	*06/12/18 20:55*	
Surrogate: Toluene-d8			*84-110*	*98 %*			*06/12/18*	*06/12/18 20:55*	
Surrogate: 4-Bromofluorobenzene			*78-110*	*99 %*			*06/12/18*	*06/12/18 20:55*	

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Sam Hamner, Senior Chemist

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
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Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

W71-2

8060711-07 (Nonpotable Water)
Sample Date: 06/07/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 21:19	GM
tert-Amyl alcohol (TAA)	ND		ug/L	20.0	20.0	1	06/12/18	06/12/18 21:19	GM
tert-Amyl methyl ether (TAME)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Benzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Bromobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Bromochloromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Bromodichloromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Bromoform	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Bromomethane	ND		ug/L	5.0	5.0	1	06/12/18	06/12/18 21:19	GM
tert-Butanol (TBA)	ND		ug/L	15.0	15.0	1	06/12/18	06/12/18 21:19	GM
2-Butanone (MEK)	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 21:19	GM
n-Butylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
sec-Butylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
tert-Butylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Carbon disulfide	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Carbon tetrachloride	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Chlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Chloroethane	ND		ug/L	5.0	5.0	1	06/12/18	06/12/18 21:19	GM
Chloroform	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Chloromethane	ND		ug/L	5.0	5.0	1	06/12/18	06/12/18 21:19	GM
2-Chlorotoluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
4-Chlorotoluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Dibromochloromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
1,2-Dibromoethane (EDB)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Dibromomethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
1,2-Dichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
1,3-Dichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
1,4-Dichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Dichlorodifluoromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
1,1-Dichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
1,2-Dichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
1,1-Dichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
cis-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM

Sam Hamner, Senior Chemist

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Analytical Results

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

W71-2

8060711-07 (Nonpotable Water)
Sample Date: 06/07/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
trans-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Dichlorofluoromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
1,2-Dichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
1,3-Dichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
2,2-Dichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
1,1-Dichloropropene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
cis-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
trans-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Diisopropyl ether (DIPE)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Ethyl tert-butyl ether (ETBE)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Ethylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Hexachlorobutadiene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
2-Hexanone	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 21:19	GM
Isopropylbenzene (Cumene)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
4-Isopropyltoluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
4-Methyl-2-pentanone	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 21:19	GM
Methylene chloride	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 21:19	GM
Naphthalene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
n-Propylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Styrene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Tetrachloroethene	**2.4**	J	ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Toluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
1,2,3-Trichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
1,2,4-Trichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
1,1,1-Trichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
1,1,2-Trichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Trichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
1,2,3-Trichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
1,2,4-Trimethylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
1,3,5-Trimethylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM

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Sam Hamner, Senior Chemist

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

W71-2

8060711-07 (Nonpotable Water)
Sample Date: 06/07/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
Vinyl chloride	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
o-Xylene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
m- & p-Xylenes	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:19	GM
Surrogate: 1,2-Dichloroethane-d4			*75-120*	*99 %*		*06/12/18*	*06/12/18 21:19*		
Surrogate: Toluene-d8			*84-110*	*98 %*		*06/12/18*	*06/12/18 21:19*		
Surrogate: 4-Bromofluorobenzene			*78-110*	*99 %*		*06/12/18*	*06/12/18 21:19*		
GASOLINE RANGE ORGANICS BY EPA 8015B									
C7-C12	ND		ug/L	500	500	1	06/15/18	06/15/18 16:37	GM
Surrogate: a,a,a-Trifluorotoluene			*85-115*	*93 %*		*06/15/18*	*06/15/18 16:37*		

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Sam Hamner, Senior Chemist

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

W46-3

8060711-08 (Nonpotable Water)
Sample Date: 06/07/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**67.9**		ug/L	10.0	10.0	1	06/12/18	06/12/18 21:43	GM
tert-Amyl alcohol (TAA)	ND		ug/L	20.0	20.0	1	06/12/18	06/12/18 21:43	GM
tert-Amyl methyl ether (TAME)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Benzene	**63.9**		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Bromobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Bromochloromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Bromodichloromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Bromoform	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Bromomethane	ND		ug/L	5.0	5.0	1	06/12/18	06/12/18 21:43	GM
tert-Butanol (TBA)	ND		ug/L	15.0	15.0	1	06/12/18	06/12/18 21:43	GM
2-Butanone (MEK)	**15.2**		ug/L	10.0	10.0	1	06/12/18	06/12/18 21:43	GM
n-Butylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
sec-Butylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
tert-Butylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Carbon disulfide	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Carbon tetrachloride	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Chlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Chloroethane	ND		ug/L	5.0	5.0	1	06/12/18	06/12/18 21:43	GM
Chloroform	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Chloromethane	ND		ug/L	5.0	5.0	1	06/12/18	06/12/18 21:43	GM
2-Chlorotoluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
4-Chlorotoluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Dibromochloromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
1,2-Dibromoethane (EDB)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Dibromomethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
1,2-Dichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
1,3-Dichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
1,4-Dichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Dichlorodifluoromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
1,1-Dichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
1,2-Dichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
1,1-Dichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
cis-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM

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Sam Hamner, Senior Chemist

As a NELAP accredited laboratory, MSS can provide a certification list upon request.

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

W46-3

8060711-08 (Nonpotable Water)
Sample Date: 06/07/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
trans-1,2-Dichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Dichlorofluoromethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
1,2-Dichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
1,3-Dichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
2,2-Dichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
1,1-Dichloropropene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
cis-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
trans-1,3-Dichloropropene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Diisopropyl ether (DIPE)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Ethyl tert-butyl ether (ETBE)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Ethylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Hexachlorobutadiene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
2-Hexanone	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 21:43	GM
Isopropylbenzene (Cumene)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
4-Isopropyltoluene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
4-Methyl-2-pentanone	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 21:43	GM
Methylene chloride	ND		ug/L	10.0	10.0	1	06/12/18	06/12/18 21:43	GM
Naphthalene	**5.5**		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
n-Propylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Styrene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Tetrachloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Toluene	**26.5**		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
1,2,3-Trichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
1,2,4-Trichlorobenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
1,1,1-Trichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
1,1,2-Trichloroethane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Trichloroethene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
1,2,3-Trichloropropane	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
1,2,4-Trimethylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
1,3,5-Trimethylbenzene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM

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Sam Hamner, Senior Chemist

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

W46-3

8060711-08 (Nonpotable Water)
Sample Date: 06/07/18

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
Vinyl chloride	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
o-Xylene	ND		ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
m- & p-Xylenes	**2.4**	J	ug/L	5.0	2.0	1	06/12/18	06/12/18 21:43	GM
Surrogate: 1,2-Dichloroethane-d4			*75-120*	*99 %*		*06/12/18*		*06/12/18 21:43*	
Surrogate: Toluene-d8			*84-110*	*99 %*		*06/12/18*		*06/12/18 21:43*	
Surrogate: 4-Bromofluorobenzene			*78-110*	*99 %*		*06/12/18*		*06/12/18 21:43*	
GASOLINE RANGE ORGANICS BY EPA 8015B									
C7-C12	ND		ug/L	500	500	1	06/15/18	06/15/18 17:14	GM
Surrogate: a,a,a-Trifluorotoluene			*85-115*	*93 %*		*06/15/18*		*06/15/18 17:14*	

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Analytical Results

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Project: ARMED FORCES RETIREMENT HOME

Project Number: CG-17-1111
Project Manager: Nancy Love

Reported:
06/18/18 15:15

Notes and Definitions

J	Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Sam Hamner, Senior Chemist

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CHAIN-OF-CUSTODY RECORD

Company Name: Chesapeake GeoSciences, Inc.	Project Manager: Nancy Love
Project Name: Armed Forces Retirement Home	Project ID: CG-17-1111
Sampler(s): Meg Staines + Devin Glancey	P.O. Number: CG171111MS

Maryland Spectral Services, Inc.
1500 Caton Center Drive, Suite G
Baltimore, MD 21227
410-247-7600 • Fax 410-247-7602
labman@mdspectral.com

Matrix Codes: NW (nonpotable water)
PW (potable water)

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	VOCs EPA 8260	PAHs EPA 8270	TPH-GRO EPA 8015M	TPH-DRO EPA 8015M	TPH-ORO EPA 8015M	RCRA 8 Metals EPA 6020	PCBs EPA 8082	TPH-C7-12 EPA 8015M	Preservative: 1+1 HCL, H_2SO_4, Methanol, $Na_2S_2O_3$, $NaHCO_3$	Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank	MSS Lab ID
MW-TB	6/5/18	06:40	X			2	X								1+1 HCl	Trip Blank	8060711-01
W72-1	6/6/18	08:55	X			6	X							X	↓		-02
W71-1	↓	11:10	X			6	X							X			-03
W46-2		14:10	X			6	X							X			-04
MW-ERB		15:30	X			3	X									Equip Rinse Blank	-05
MW-D	↓	00:00	X			6	X										-06
W71-2	6/7/18	09:45	X			6	X							X			-07
W46-3	↓	11:25	X			6	X							X	↓		-08

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
(Printed) Devin Glancey	6/7/18 15:05	(Printed)	(Printed)		(Printed)
Relinquished by: (Signature)	Date/Time	Received by Lab: (Signature)			
(Printed)		(Printed)			

Turn Around Time:
- [X] Normal (7 day)
- [ ] 5 day
- [ ] 4 day
- [ ] 3 day
- [ ] Rush (2 day)
- [ ] Next Day
- [ ] Other: _____
- [ ] Specific Due Date: _____

Lab Use:
Temp: 6.0 °C
- [✓] Received on Ice
- [ ] Received same day
- [ ] Preservation Appropriate

Delivery Method:
- [ ] Courier
- [X] Client
- [ ] UPS
- [ ] FedEx
- [ ] USPS
- [ ] Other: _____

Special Instructions/QC Requirements & Comments:

Sample Disposal:
- [ ] Return to Client
- [ ] Disposal by lab
- [X] Archive for 7 days

MSS-F001-03/13

APPENDIX P

BUILDING 46 – DCRBCA TIER 1 REPORT FORMS

Risk-Based Corrective Action For Petroleum Releases At Underground Storage Tank Sites

(DCRBCA TIER 1 REPORT FORMS)

FACILITY NAME:	***Armed Forces Retirement Home - Bldg 46***
WARD NAME:	***Ward 4***
LUST CASE NO.:	***2018010***
FACILITY ID NO.:	***4010007***
SUBMITTAL DATE:	***August 1, 2018***
PREPARED BY:	***Chesapeake GeoSciences, Inc.***
REVIEWED BY:	***Nancy Love***

`

DCRBCA REPORT

TABLE OF CONTENTS *(Page 1 of 3)*

TIER 1 FORMS

DCRBCA REPORT

TABLE OF CONTENTS *(Page 2 of 3)*

TIER 1 FORMS (Continued)

TIER 2A FORMS

DCRBCA REPORT

TABLE OF CONTENTS *(Page 3 of 3)*

All maps submitted to the Division must include a bar scale, legend, north arrow, location of all known soil boring and monitoring wells, and date of map, where appropriate.

ATTACHMENTS

Attachment No.	Description	Check box if included
1.	Topographic Map	☑
2.	Site Map with Utility Locations	☑
3.	Land Use Map (Radius of 500 feet)	☐
4.	Area Map: with detailed land use in the vicinity of the site (at least 500 feet in the downgradient direction and one property deep on all other sides including across the street)	☐
5.	Site Map with UST Location(s)	☑
6.	Representative Soil Boring Logs: with monitoring well screen interval, size, and depth (also indicate sample depths, field screening results, and initial water level)	☑
7.	Representative Soil Boring Logs: cross-section showing the stratigraphy of the site	☐
8.	Area Geologic Map	☐
9.	Area Map with Well Locations: within one-half mile radius of the site (the wells on the map must be labeled). Maps must also indicate the location of streams, lakes, etc., within a 500 foot radius of the site.	☐
10.	Groundwater Gradient Map: contoured map with the predominant flow direction from the most recent sampling event (add multiple maps if the flow direction fluctuates)	☑
11.	Soil and Groundwater Concentration Maps: for benzene, MTBE, total BTEX, and Total PAHs from the most recent sampling event	☐
12.	Soil and Groundwater Contour Maps: for benzene, MTBE, total BTEX, and Total PAHs from the most recent sampling event	☐
13.	Time vs. Concentration Trend Maps: for benzene, MTBE, and total BTEX if four or more sampling events have occurred per well	☐
14.	Map Identifying Point(s) of Exposure: for both current and future conditions	☐
15.	Historical Groundwater Analytical and Gauging Data	☐
16.	Representative Concentrations	☐

OTHER ATTACHMENTS:

All figures are incuded in the figure section of the report.

DCRBCA REPORT	FORM NO. 1
LUST CASE NO.: 2018010	**FACILITY ID NO.: 4010007**
SUBMITTAL DATE: 01-Aug-18	**PREPARED BY: Chesapeake GeoSciences, Inc.**

EXECUTIVE SUMMARY

Facility name:	*Armed Forces Retirement Home - Bldg 46*
Facility address:	*3700 N. Capital Street, NW*
	Washington, DC 20011
Status of facility:	☐ Active ☑ Inactive
Ground surface condition:	*Level area between ramp/retaining wall and building*
Estimated volume of product released:	*Evidence of a release from the USTs has not been detected.*
Is native soil impacted?	☑ On-site ☐ Off-site
Is groundwater impacted?	☐ On-site ☐ Off-site
Has the source of release been identified?	*Release apprears to be from the sanitary sewer line.*
Has free product ever been detected?	☐ YES ☑ NO
Was free product removed?	☐ YES ☐ NO
Was free product detected in the most recent sampling event?	☐ YES ☐ NO
Has surface water been impacted by the release?	☐ YES ☑ NO
Shallowest depth to groundwater:	*Discrete thin moist intervals in soil between 23 and 28' BG.*
Average depth to groundwater:	*103'*
Has a drinking water supply well been impacted by this release?	☐ YES ☑ NO ☐ UNKNOWN

RECOMMENDATIONS

TIER 1

- ☑ No further action under Tier 1
- ☐ Compliance Monitoring
- ☐ Remediate to Tier 1 RBSLs to achieve no further action
- ☐ Perform interim remedial action and then re-evaluate
- ☐ Perform Tier 2A Evaluation

TIER 2A

- ☐ No further action under Tier 2A
- ☐ Compliance Monitoring
- ☐ Remediate to Tier 2A SSTLs to achieve no further action
- ☐ Perform interim remedial action and then re-evaluate
- ☐ Perform Tier 2B Evaluation

ADDITIONAL NOTES

The Tier 1 RBCA evaluation identified no unacceptable risks to human health as documented in the text of the report. Chesapeake GeoSciences, Inc. (CGS) recommends no further action under Tier 1. The USTs were determined to have a capacity of 275-gallons each and were found to extend beneath a retaining wall. A DC licensed structural engineer concluded that the USTs could not be safely removed, because the foundation of the retaining wall would be undermined and that the tanks should be abandoned in place.

Recommended attachments: None.

DCRBCA REPORT	FORM NO. 2
LUST CASE NO.: 2018010	**FACILITY ID NO.: 4010007**
SUBMITTAL DATE: 01-Aug-18	**PREPARED BY: Chesapeake GeoSciences, Inc.**

FACILITY INFORMATION

Facility name:	***Armed Forces Retirement Home - Bldg 46***
Facility address:	***3700 N. Capital Street, NW***
	Washington, DC 20011
Facility phone number:	***202-288-4473 (Justin Seffens - Corporate Facility Manager)***
Tank owner:	***Armed Forces Retirement Home***
Tank owner's address:	***3700 N. Capital Street, NW***
	Washington, DC 20011
Tank owner's phone number:	***202-288-4473 (Justin Seffens - Corporate Facility Manager)***
Property owner:	***Armed Forces Retirement Home***
Property owner's address:	***3700 N. Capital Street, NW***
	Washington, DC 20011
Property owner's phone number:	***202-288-4473 (Justin Seffens - Corporate Facility Manager)***

REPORT PREPARED BY

I certify that the DCRBCA evaluation as stated in this report was prepared under my supervision. I am experienced in the concepts and procedures of risk assessment and risk management as they relate to the DCRBCA evaluation.

	17-Jul-18
DCRBCA Evaluator	*Date*
Nancy Love	***Chesapeake GeoSciences, Inc.***
Printed Name	*Company Name and Telephone Number*

ADDITIONAL NOTES

Chesapeake GeoSciences, Inc. is referred to as CGS in this report. CGS Telephone Number: 410-740-1911

The District of Columbia Department of Energy & Environment (Underground Storage Tanks Branch) is referred to as DOEE in this report.

Figure 1 - Site Location Map presents the topographic map and is incuded in the figure section of the report.

Recommended attachments: Topographic map

DCRBCA REPORT	FORM NO. 3
LUST CASE NO.: 2018010	FACILITY ID NO.: 4010007
SUBMITTAL DATE: 01-Aug-18	PREPARED BY: Chesapeake GeoSciences, Inc.

SITE CLASSIFICATION SCENARIOS

	Site Classification Scenario	YES	NO	Recommended Initial Response Actions
	Classification 1: Immediate threat to human health, safety, or sensitive environmental receptors.			**Notify appropriate local and other authorities, property owners, and potentially affected parties, and evaluate the need to:**
1.1	**Vapor accumulation in structures**: Explosive levels or concentrations of vapors that could cause acute health effects are present in a residence or other building	☐	☑	Evacuate occupants and begin abatement measures (e.g., subsurface ventilation, building pressurization).
1.2	**Vapor accumulation in utility lines**: Explosive levels of vapors are present in subsurface utility systems, but no other buildings or residences are impacted	☐	☑	Evacuate immediate vicinity, begin abatement measures (e.g., ventilation).
1.3	**Free product release**: Free product is present in significant quantities at ground surface, on surface water bodies, in utilities, or in surface water runoff.	☐	☑	Prevent further free product migration by appropriate containment measures, institute free-product recovery, restrict area access.
1.4	**Public water supply impact**: An active public water supply well, public water supply line, public surface water intake, or private drinking water well is impacted or immediately threatened.	☐	☑	Notify users, provide alternate water supply, hydraulically control contaminated water, and treat water at point-of-use.
1.5	**High ambient vapor concentrations**: Ambient vapor/particulate concentrations exceed concentrations of concern from an acute exposure or safety viewpoint.	☐	☑	Install a vapor barrier (e.g., capping, foam), remove the source, or restrict access to affected area.
1.6	**Ecological impact**: A sensitive habitat or resource (e.g., economically important species, threatened and endangered species, sport fish) is impacted and affected.	☐	☑	Minimize extent of impact by containment measures, and implement habitat management to minimize exposures.

Indicate Site Classification:

ADDITIONAL NOTES

DCRBCA REPORT	FORM NO. 3
LUST CASE NO.: 2018010	FACILITY ID NO.: 4010007
SUBMITTAL DATE: 01-Aug-18	PREPARED BY: Chesapeake GeoSciences, Inc.

SITE CLASSIFICATION SCENARIOS

	Site Classification Scenario	YES	NO	Recommended Initial Response Actions
	Classification 2: Short-term threat, (0-2 years), to human health, safety, or sensitive environmental receptors.			**Notify appropriate local and other authorities, property owners, and potentially affected parties, and evaluate the need to:**
2.1	**Potential vapor accumulation in structures**: There is a potential for explosive vapor levels or concentrations of vapors that could cause acute health effects to accumulate in residence or other buildings.	☐	☑	Assess the potential for vapor migration (through monitoring/modeling) and remove source, if necessary, or install a vapor migration barrier.
2.2	**Contaminated soil in proximity to receptors**: Shallow contaminated soils are exposed and open to public access, and dwellings, parks, playgrounds, day-care centers, schools, or similar use facilities are within 500 feet (152 meters) of those soils.	☐	☑	Remove soils, cover area, or restrict access.
2.3	**Non-potable water supply well impacted**: A non-potable water supply well is impacted or immediately threatened.	☐	☑	Notify owner/user. Evaluate need for point-of-use water treatment, hydraulic control, or alternate water supply.
2.4	**Potential impact to water supply well producing from impacted interval**: Groundwater is impacted, and a public or domestic water supply well producing from the impacted aquifer is located within 2 years projected groundwater travel time from the down gradient edge of the dissolved plume.	☐	☑	Institute monitoring. Evaluate if monitored natural attenuation is sufficient or if hydraulic control is needed. MTBE contamination needs to be considered.
2.5	**Potential impact to water supply well not producing from impacted interval**: Groundwater is impacted, and a public or domestic water supply well producing from a different interval is within the known area of contamination.	☐	☑	Monitor groundwater well quality and evaluate if control is necessary to prevent vertical migration to the supply well.
2.6	**Plume discharge to surface water or other sensitive habitat**: Impacted surface water, storm water, or groundwater discharges within 500 feet (152 meters) of a sensitive habitat, or surface water body used for human drinking water or contact recreation.	☐	☑	Begin containment measures. Restrict access to areas near discharge. Evaluate magnitude and impact of the discharge.

Indicate Site Classification:

ADDITIONAL NOTES

DCRBCA REPORT	FORM NO. 3
LUST CASE NO.: 2018010	FACILITY ID NO.: 4010007
SUBMITTAL DATE: 01-Aug-18	PREPARED BY: Chesapeake GeoSciences, Inc.

SITE CLASSIFICATION SCENARIOS

	Site Classification Scenario	YES	NO	Recommended Initial Response Actions
	Classification 3: Long-term threat, (>2 years), to human health, safety, or sensitive environmental receptors.			**Notify appropriate local and other authorities, property owners, and potentially affected parties, and evaluate the need to:**
3.1	**Potential leachate migration**: Soil is impacted, and depth from impacted soil to the first potable aquifer is less than 50 feet (15 meters).	☐	☑	Monitor groundwater and determine the potential for future migration of chemical(s) of concern to the groundwater.
3.2	**Potential impact to potable water well producing from impacted interval**: Groundwater is impacted, and potable water supply wells producing from the impacted interval are located more than 2 years projected groundwater travel time from the dissolved plume.	☐	☑	Monitor the dissolved plume and evaluate the potential for monitored natural attenuation and the need for hydraulic control.
3.3	**Potential impact to non-potable water well producing from impacted interval**: Groundwater is impacted, and non-potable water supply wells producing from the impacted interval are located more than 2 years projected groundwater travel time from the downgradient edge of the dissolved plume.	☐	☑	Identify water usage of well, assess the effect of potential impact, monitor the dissolved plume, and evaluate whether monitored natural attenuation or hydraulic control are appropriate control measures.
3.4	**Potential impact to water well not producing from impacted interval**: Groundwater is impacted, and water supply wells that do not produce from the impacted interval are located within the extent of chemical(s) of concern.	☐	☑	Monitor the dissolved plume, notify the user, determine the potential for vertical migration, and determine if any impact is likely.
3.5	**Potential surface water or ecological impact**: Impacted surface water, storm water, or groundwater discharges within 1500 feet (457 meters) of a sensitive habitat, or surface water body used for human drinking water or contact recreation.	☐	☑	Investigate current impact on sensitive habitat or surface water body, restrict access to area of discharge, if necessary, and evaluate the need for containment/control measures.
3.6	**Contaminated soils exposed**: Shallow contaminated soils are exposed and open to public access, and dwellings, parks, playgrounds, day-care centers, schools, or similar use facilities are more than 500 feet (152 meters) away from those soils.	☐	☑	Restrict access to impacted soils.

Indicate Site Classification:

ADDITIONAL NOTES

DCRBCA REPORT	FORM NO. 3
LUST CASE NO.: 2018010	FACILITY ID NO.: 4010007
SUBMITTAL DATE: 01-Aug-18	PREPARED BY: Chesapeake GeoSciences, Inc.

SITE CLASSIFICATION SCENARIOS

	Site Classification Scenario	YES	NO	Recommended Initial Response Actions
	Classification 4: No demonstrable long-term threat human health, safety, or sensitive environmental receptors.			**Notify appropriate local and other authorities, property owners, and potentially affected parties, and evaluate the need to:**
4.1	**Impact to non-potable aquifer**: Non-potable aquifer with no existing local use impacted.	☐	☑	Monitor groundwater and evaluate effect of monitored natural attenuation on dissolved plume migration.
4.2	**Low potential for leachate from soils to groundwater**: Soil is impacted and the impacted soil is located greater than 50 feet (15 meters) above the nearest groundwater.	☑	☐	Monitor groundwater and evaluate effect of monitored natural attenuation on leachate migration.
4.3	**Low potential for water supply well impact**: Groundwater is impacted and wells are located down-gradient outside the known extent of chemical(s) of concern, and they produce from a non-impacted interval.	☑	☐	Monitor groundwater and evaluate effect of monitored natural attenuation on dissolved plume migration.

Indicate Site Classification: Class 4

ADDITIONAL NOTES

Form 3 Notes: The release from the sanitiary sewer line impacted soil near the USTs. Therefore, Item 4.2 was answered "yes". Given the location of the Site and the absence of water supply wells in the vicinity of the Site, there is a low potential for water supply well impact. Therefore, Item 4.3 was answered "yes".

DCRBCA REPORT	FORM NO. 4
LUST CASE NO.: 2018010	FACILITY ID NO.: 4010007
SUBMITTAL DATE: 01-Aug-18	PREPARED BY: Chesapeake GeoSciences, Inc.

SITE DESCRIPTION

Site Status:

- ☐ Operating as a gasoline station
- ☐ Not operating, with tanks in place
- ☐ Temporarily out of service from ____ to ____
- ☑ Permanently out of service. Tanks permanently closed in *date unknown* Currently site used as *Bldg 46 is currently vacant*

Ground Surface Condition:

- ☐ Unpaved
- ☑ Paved % area paved *80* Materials *Building/paved areas*

Any visible cracks in the pavement? ☐ YES ☐ NO

Subsurface Utilities:

In the space provided for additional notes, please indicate the location and distance to the nearest utility access point (manhole).

Have the utilities been screened for vapor levels? ☐ YES ☑ NO If YES, attach documentation of vapor monitoring results.

In the space provided for additional notes, please indicate the location of the nearest sump and dewatering well.

Indicate which of the following utilities currently act as conduits or are potentially liable to become conduits under the columns entitled "Impacted by release," and "Potentially Impacted by Release," respectively.

	Depth [feet]	Type of material	Flow direction	Impacted by release	Potentially impacted by release
☑ Sanitary sewer	*10*	*unknwon*	*southwest*	*source*	*no*
☐ Covered storm sewer					
☐ Open ditch					
☐ Water line					
☐ Gas line					
☐ Electric line					
☐ Telephone line					

Current Status of Excavated Soil:

If any USTs or ASTs were over-excavated, discuss the status of the excavated soil.

	Date	Quantity	Location
☐ Stockpiled On-site			
☐ Disposed Off-site			
☐ Used (as fill material, etc.) On-site			
☐ Used as Road Base			
☐ Land Farm			
☐ Stockpiled Off-site			

ADDITIONAL NOTES

Figure 3A - Building 46 Layout Map with Utilities shows the locations of the USTs and sanitary sewer line.

Recommended attachments: Site map with locations of utilities and USTs.

DCRBCA REPORT	FORM NO. 5
LUST CASE NO.: 2018010	FACILITY ID NO.: 4010007
SUBMITTAL DATE: 01-Aug-18	PREPARED BY: Chesapeake GeoSciences, Inc.

LAND USE

Current On-site Land Use	Current
Residential	☐
Commercial	☐
Industrial	☐
Other	☑

Future On-site Land Use	Future
Residential	☑
Commercial	☑
Industrial	☐
Other	☐

Comments: *Justify the choice for future land use.*

Building 46 housed the former heating plant for AFRH. The former laundry and dry cleaning plant for AFRH occupied the second floor of Building 46A and the second floor of the southeastern portion of Building 46.

Building 46 will be re-developed. The future use of Building has not yet been determined.

Immediate Off-site Land Use (within 1,000 feet - at a minimum, state whether residential, agricultural, commercial, or sensitive)

North: ***North Capitol Street, school***

Northeast: ***North Capitol Street, church properties, school***

Northwest: ***On-site within 1,000 feet***

South: ***On-site within 1,000 feet***

Southeast: ***North Capitol Street, undeveloped***

Southwest: ***On-site within 1,000 feet***

West: ***On-site within 1,000 feet***

East: ***North Capitol Street, church properties***

ADDITIONAL RECEPTOR SURVEY

List the distance and direction (downgradient, upgradient, or crossgradient) to these facilities (generally 1 mile radius is sufficient).

	Distance (feet)	Direction
Nearest residential site:	***1,000 feet (on-site)***	***Northwest***
Nearest commercial site:	***2,100 feet***	***Northwest***
Nearest industrial site:	***Not applicable***	***Not applicable***
If site vacant, nearest inhabited building:	***Not applicable***	***Not applicable***
Nearest ecologically sensitive area:	***4,500 feet***	***Southwest***
Nearest school, hospital, day care, retirement home, etc.:	***1,000 feet***	***Northeast***

ADDITIONAL NOTES

Recommended attachments: Land use map (1,000 foot radius), Area map - with detailed land use in the vicinity of the site.

DCRBCA REPORT	FORM NO. 6
LUST CASE NO.: 2018010	**FACILITY ID NO.: 4010007**
SUBMITTAL DATE: 01-Aug-18	**PREPARED BY: Chesapeake GeoSciences, Inc.**

CHRONOLOGY OF EVENTS

Date	***Instructions:*** *Describe site activities related to spill events, including location, type, and estimated volume of materials stored or released, tank pulls, time and duration of release, and affected media (e.g. soil, groundwater, etc.). Describe monitoring well installation, soil boring activities, and slug tests. Also discuss past corrective action efforts as appropriate. (Use additional sheets as necessary)*
	Information regarding the date of installation of the USTs and the date they were taken out of service is unknown.

Recommended attachments: None.

DCRBCA REPORT	FORM NO. 7
LUST CASE NO.: 2018010	FACILITY ID NO.: 4010007
SUBMITTAL DATE: 01-Aug-18	PREPARED BY: Chesapeake GeoSciences, Inc.

UNDERGROUND STORAGE TANK TYPE

Provide the installation dates for all tanks and removal dates for inactive tanks. A site map denoting Tank Number(s) is required.

Tank Number(s)	Product	Capacity	Active		Installation Date	Removal Date	Closure in Place Date	Temporarily Out of Use Since
			Yes	No				
1	*Unknown*	*275-gallon*	☐	☑	*Unknown*			*Unknown*
2	*Unknown*	*275-gallon*	☐	☑	*Unknown*			*Unknown*
			☐	☐				
			☐	☐				
			☐	☐				
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			☐	☐				
			☐	☐				
			☐	☐				
			☐	☐				

ADDITIONAL NOTES

Figure 3 - Building 46 Layout Map shows the locations of the USTs. Figure 7 - Building 46 Soil Boring, Monitoring Well, and Vapor Monitoring Point Location Map shows the sampling locations. These figures are incuded in the figure section of the report.

Recommended attachments: A site map with tank location(s).

DCRBCA REPORT	FORM NO. 8
LUST CASE NO.: 2018010	FACILITY ID NO.: 4010007
SUBMITTAL DATE: 01-Aug-18	PREPARED BY: Chesapeake GeoSciences, Inc.

RELEASE CHARACTERIZATION

Release discovered during/by:

- ☐ UST Removal
- ☐ Failed System Tightness Test
- ☐ Inventory Control
- ☐ Facility Remodeling/Construction Activity
- ☐ Unknown
- ☐ Closure in Place
- ☑ Environmental Assessment
- ☐ Citizen Complaint
- ☐ Known Spill Incident
- ☑ Other (specify): Phase II ESA activities were performed to evaulate the possibility of a release from the USTs.

The impact to soil that was found apprears to be from a sanitary sewer line release.

SOURCE(S) OF RELEASE

- ☐ Spills/Overfills
- ☐ Piping
- ☐ Dispenser Islands
- ☐ Tanks
- ☐ Unknown
- ☑ Other (specify): ***Sanitary sewer line***

SUBSTANCE(S) RELEASED

- ☐ Gasoline
- ☐ Diesel
- ☐ Used Oil
- ☐ AV Gas
- ☐ Jet Fuel
- ☐ Hydraulic Fluid
- ☐ Kerosene
- ☑ Other (specify): ***Stoddard solvent***

SUMMARY OF SPILL

Has the source of release been identified?	☑ YES	☐ NO	
Has the release been abated?	☑ YES	☐ NO	
Is native soil impacted?	☑ YES	☐ NO	
Is groundwater impacted?	☐ YES	☑ NO	
Is surface water impacted?	☐ YES	☑ NO	***No surface water within 4,500 feet***

DETAILS OF KNOWN SPILLS (if any)

Date Released	Location	Quantity/Type
Unknown	***Near USTs***	***Unknown***

ADDITIONAL NOTES

Recommended attachments: None.

DCRBCA REPORT	FORM NO. 9
LUST CASE NO.: 2018010	FACILITY ID NO.: 4010007
SUBMITTAL DATE: 01-Aug-18	PREPARED BY: Chesapeake GeoSciences, Inc.

FREE PRODUCT

Has free product been found at the site? ☐ YES ☑ NO

(Note if NO, proceed to the next report form)

Date free product was released (if known):

Type of free product released:

Estimated quantity of free product released:

Number of monitoring wells currently at the site:

List the monitoring wells historically containing free product:

List the monitoring wells currently containing free product:

Specify the well ID maximum thickness:

Well ID: _____ _____ Feet; Date: _____

RECOMMENDATIONS

Has free product removal been initiated? ☐ YES ☐ NO

If YES, specify method of removal (bailer, pump, etc.)?

If NO, cite reason:

Frequency of removal (weekly, monthly, etc.):

Total number of recovery events to date:

Total amount of purge-water recovered:

Total amount of free product recovered:

Date of latest free product report submittal:

ADDITIONAL NOTES

Recommended attachments: Free product thickness maps as appropriate.

DCRBCA REPORT	FORM NO. 10
LUST CASE NO.: 2018010	FACILITY ID NO.: 4010007
SUBMITTAL DATE: 01-Aug-18	PREPARED BY: Chesapeake GeoSciences, Inc.

SITE STRATIGRAPHY AND HYDROGEOLOGY

STRATIGRAPHY OF THE SITE

Depth [feet]	Unified Soil Classification	Type of Soil
0-7	*OL, ML, CL*	*Fill*
7-44	*CL, ML, SC, minor GW, GP, SM*	*Clayey Unit*
44->50	*SM, SP*	*Sandy Unit*

Predominant soil type:

Depth [feet]	Type of Bedrock & Geological Formation (discuss rock properties and features)
Unknown	*Patuxent Formation*

HYDROGEOLOGY OF THE SATURATED IMPACTED ZONE

Type of aquifer? ☐ Confined ☑ Unconfined ☐ Perched

Underlying predominant aquifer name:

Aquifer classification (if applicable): *non-potable*

Range of groundwater level fluctuations [ft bgs]: *90 - 107' BG*

Average depth to water table/static water level: *100'*

Flow direction: *South-southeast*

Hydraulic gradient (i) [--]: *0.0015 to 0.0025*

Hydraulic conductivity (K) [cm/year]:

Hydraulic conductivity test method (Select from below):

☐ Grain size/Sieve analysis ☐ Slug test ☐ Pump test Duration (hrs):

☐ Other (*specify and attach literature*)

Darcy velocity (K x i) [cm/year - calculated]:

Annual precipitation (average for last 30 years) [inches/year]:

VADOSE ZONE CHARACTERISTICS

	Values/Range			Method
Dry bulk density [g/cm^3]		☐ Estimated	☐ Measured	
Estimated porosity (θ) [cm^3/cm^3]:		☐ Estimated	☐ Measured	
Water content [cm^3/cm^3]:		☐ Estimated	☐ Measured	
Fractional organic carbon content [g-C/g-soil]:		☐ Estimated	☐ Measured	

ADDITIONAL NOTES

Soil boring logs are incluced in Appendices F, G, and H of the report.

Recommended attachments: Area geologic map/relevant cross-sections and soil boring logs.

DCRBCA REPORT	FORM NO. 11
LUST CASE NO.: 2018010	FACILITY ID NO.: 4010007
SUBMITTAL DATE: 01-Aug-18	PREPARED BY: Chesapeake GeoSciences, Inc.

GROUNDWATER USE

Current

	YES	NO	IN USE	NOT USED
Potable domestic water use:	☐	☑	☐	☐
Non-potable water use:	☐	☑	☐	☐
Public/Municipal supply:	☐	☑	☐	☐
Industrial supply:	☐	☑	☐	☐
Agriculture:	☐	☑	☐	☐
Other (explain in Notes):	☐	☑	☐	☐

Future

	YES	NO
Potable domestic water use:	☐	☑
Non-potable water use:	☐	☑
Public/Municipal supply:	☐	☑
Industrial supply:	☐	☑
Agriculture:	☐	☑
Other (explain in Notes):	☐	☑

NOTES (Justify choice for future use)

The Site and all surrounding areas are currently supplied with municipal water which is obatined from surface water resources located more than 4,500 feet from Building 46. No change in future water supply is expected.

SURFACEWATER USE

Current

	YES	NO	IN USE	NOT USED
Potable domestic water use:	☐	☑	☐	☐
Non-potable water use:	☐	☑	☐	☐
Public/Municipal supply:	☑	☐	☐	☐
Industrial supply:	☐	☑	☐	☐
Agriculture:	☐	☑	☐	☐
Other (explain in Notes):	☐	☑	☐	☐

Future

	YES	NO
Potable domestic water use:	☐	☑
Non-potable water use:	☐	☑
Public/Municipal supply:	☑	☐
Industrial supply:	☐	☑
Agriculture:	☐	☑
Other (explain in Notes):	☐	☑

NOTES (Justify choice for future use)

No surface water bodies are present within 4,500 feet of Building 46. The Site and all surrounding areas are currently supplied with municipal water which is obatined from surface water resources located more than 4,500 feet from the Site. No change in future water supply is expected.

ECOLOGICAL RECEPTORS AND HABITATS

		YES	NO
1.	Are there any ecological receptors or habitats present within a 1000 foot radius from the facility?	☐	☑
2.	Is there a complete pathway at the site for an ecological impact beyond what is considered under the surface water impacts evaluation?	☐	☑
3.	Are there visible indications of stressed receptors or habitats on or near the site that may be a result of a chemical release?	☐	☑
	Other (explain in Notes):	☐	☐

If the answer to questions 2 & 3 is <u>YES</u>, contact the Division before proceeding any further.

ADDITIONAL NOTES

Recommended attachments: Area map with well locations within a one-half mile radius of the site.

DCRBCA REPORT **FORM NO. 13**

LUST CASE NO.: 2018010	**FACILITY ID NO.: 4010007**
SUBMITTAL DATE: 01-Aug-18	**PREPARED BY: Chesapeake GeoSciences, Inc.**

ANALYTICAL DATA SUMMARY FOR SUBSURFACE SOIL

MW / SB No.	*See Table 4 for soil data.*																		**Arithmetic Average**	**Maximum**	**Ratio (Maximum/ Arithmetic Average) ***
Sampling Date	*and Tier 1 screening.*																				
Sample Depth (ft)																					
ORGANIC CHEMICALS																					
Benzene																					
Toluene																					
Ethylbenzene																					
Xylenes (mixed)																					
Methyl-tert-butyl-ether (MTBE)																					
Naphthalene																					
TPH																					
TPH-GRO																					
TPH-DRO																					
TPH-ORO																					
C5 - C6 (Aliphatics)																					
>C6 - C8 (Aliphatics)																					
>C8 - C10 (Aliphatics)																					
>C10 - C12 (Aliphatics)																					
>C12 - C16 (Aliphatics)																					
>C16 - C35 (Aliphatics)																					
>C8 - C10 (Aromatics)																					
>C10 - C12 (Aromatics)																					
>C12 - C16 (Aromatics)																					
>C16 - C21 (Aromatics)																					
>C21 - C35 (Aromatics)																					

NOTE:

Provide any laboratory analytical datasheets not previously submitted to the Division. Add additional sheets as needed.

Non-detects can be expressed as ND, BDL, etc. All concentrations in mg/kg.

*** : If the ratio is high (for example >10) there may be a hot spot and additional investigation/evaluation is warranted. In such circumstances, contact the Division.**

Recommended Attachments: Site map showing location(s) of sub-surface soil sample(s), and chemical concentration maps.

DCRBCA REPORT

FORM NO. 14

LUST CASE NO.: 2018010 | **FACILITY ID NO.: 4010007**

SUBMITTAL DATE: 01-Aug-18 | **PREPARED BY: Chesapeake GeoSciences, Inc.**

ANALYTICAL DATA SUMMARY FOR GROUNDWATER

Monitoring Well Number		*See Table 7*												
Screen Interval (feet below datum)		for	and											
Water Level (feet below datum)		Groundwater	Tier 1											
Installation Date		Data	screening.											
Number of Times Sampled														
Benzene	No. of Detects													
MCL = 0.005 mg/l	Range (high - low)													
	Maximum (mg/l)													
	Mean (mg/l)													
	Recent Trend													
Toluene	No. of Detects													
MCL = 1.0 mg/l	Range (high - low)													
	Maximum (mg/l)													
	Mean (mg/l)													
	Recent Trend													
Ethylbenzene	No. of Detects													
MCL = 0.7 mg/l	Range (high - low)													
	Maximum (mg/l)													
	Mean (mg/l)													
	Recent Trend													
Xylenes	No. of Detects													
MCL = 10 mg/l	Range (high - low)													
	Maximum (mg/l)													
	Mean (mg/l)													
	Recent Trend													

NOTE: Provide any laboratory analytical datasheets not previously submitted to the Division. Add additional sheets as needed.
For "Range", use historical data (i.e., all data), for "Maximum" and "Mean", use the past two (2) years of data.

Recommended Attachment: Historical GW data and site map showing location(s) of monitoring well(s), and chemical concentration maps.

DOEE Comments to AFRH Phase II Report – August 2018

Building 46:

1. Since PCE concentrations exceeded VISL in the sub-slab soil vapor samples, DOEE requires the following measures for the future repurposed building:

    - Install active depressurized technology (ADT) to mitigate the soil vapor intrusion into the building. A sub-slab depressurization (SSD) system is a common type of ADT. The ADT design should be signed by PE. For additional details for vapor mitigation system, refer to EPA Guidance document for additional details "Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air" dated June 2015.

    - Install permanent sub-slab soil vapor points for future soil vapor monitoring.

2. Also, as a part of subsurface investigation, collect additional sub-slab soil vapor samples to the north and east of VMP-01 and VMP-06 to delineate the soil vapor exceedances.

3. After considering the location of the UST especially the proximity to the tunnel, the UST Branch doesn't have a problem granting the variance the closure in-place. But due to the fact that a decision has not been made as to how long before the abandonment would take place, we cannot not grant the abandonment in-place at this time because the approval is time sensitive.

    It is therefore recommended that you (AFRH) put the UST in temporary closure, usually for one year, after which you either remove the tank or abandon it in-place. However, you can request an extension for another one year should you need additional time to reach a decision. Putting the UST in temporary closure requires that you empty it of all product, clean the tank and maintain leak detection and financial responsibility.

NOTE: AFRH has started the process to put the Bldg 46 USTs in temporary closure.

Building 76:

1. Collect additional soil samples for horizontal delineation of TPH-DRO concentrations in soil in all directions.