

SITE INVESTIGATION REPORT

**R&G Properties II, Inc.
1755 US Route 302
Berlin, Vermont**

SMS Site # 2013-4369

Owned by:

**Malone Properties
122 Gallison Hill Road
Montpelier, VT
05602**

Prepared:

July 19, 2013

KDAI Project No. 97020-018



KD ASSOCIATES, INC.

Environmental Consulting & Contracting

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EXECUTIVE SUMMARY

The following report summarizes the results of the site investigation activities for soil and groundwater contamination at the R&G Properties II, Inc. site located at 1755 US Route 302 in Berlin, VT (see Vicinity Map, Appendix A). The site investigation was requested by Mr. Ashley Desmond of the VT Department of Environmental Conservation (VTDEC) in an April 9, 2013 letter to the owner (at that time) Mr. Randy Rouleau. Consistent with our approved Work Plan dated April 19, 2013, K-D Associates, Inc. (KDAI) contracted and supervised the installation of five soil borings/groundwater monitoring wells, and collected soil and groundwater samples in response to the March 3013 discovery of leaks in a two piston hydraulic lift inside the building.

The results of this investigation indicate that the depth to groundwater is approximately 5 feet bgs with an easterly flow across the site at an approximate gradient of 0.025 ft/ft. Confirmatory soil samples collected during the monitoring well installation did not contain VOC contaminants above the Residential or Industrial Soil Screening Values (SSL). No TPH was detected above the laboratory detection limits in soil samples collected during the installation of the monitoring wells.

No free phase product was detected in any of the monitoring wells. Target groundwater contaminants were detected in each of the three indoor monitoring wells, however the VOC concentrations in all of the indoor wells were all below the Vermont Groundwater Enforcement Standard (GWES). No TPH was detected above the laboratory detection limits in any of the groundwater samples from the indoor wells.

GWES was exceeded in one of the two downgradient monitoring wells (MW-3). The combined Trimethylbenzene concentration for MW-3 was 367 ppb, just over the GWES of 350 ppb. Also, the Naphthalene concentration at MW-3 was 44 ppb, exceeding the GWES of 20 ppb. No TPH was detected above the laboratory detection limits in either of the groundwater samples from the outdoor wells.

The degree of contamination at the former lift site appears to pose little risk to nearby surface water, drinking water supplies, and human exposure. The area of contamination appears localized and confined to subsurface soils and groundwater with little potential for exposure to the public.

SITE INFORMATION

SMS Site Identification / Location

R&G Properties II, Inc.
1755 US Route 302
Berlin, Vermont

SMS Site #2013-4369

Current Owner

Malone Properties
122 Gallison Hill Road
Montpelier, Vermont 05602
(802) 223-9954
Attn: Patrick Malone

BACKGROUND

The R&G Properties II, Inc. Property a ±2 acre parcel on the west side of US Route 302 near the intersection with Hershey Road. The building on site was originally constructed in 1946 for New England Telephone for warehouse space, but is currently vacant. During the last commercial use of building, it was divided into three units, but all the interior walls have recently been removed. An in-ground, two piston hydraulic lift had been located in the center unit.

During the property's past use by New England Telephone, three USTs were removed from this site in 1986 and 1987. The tanks included a 5,000-gallon heating oil UST, a 2,000-gallon diesel UST and a 2,000-gallon gasoline UST. No other USTs are known to be present on site.

During the March 25-26, 2013 removal of the hydraulic lift, hydraulic oil was observed in the soil surrounding both pistons and a hole in the south piston sleeve was noted. Field PID readings from the soil around the south piston ranged from 0.1 ppm to 11.8 ppm, with the highest reading being at two feet bgs. Laboratory analysis of the soil from two feet bgs yielded a TPH concentration of 6,290 mg/Kg, and a sample collected from six feet bgs yielded a TPH concentration of 1,290 mg/Kg. Field PID readings from the north piston ranged from 1.0 ppm to 45.3 ppm with the peak reading noted at seven feet bgs. Groundwater was noted in the excavations at approximately six feet bgs. No visual or olfactory evidence of leakage was noted in the soil below the sub-slab piping near the above ground oil reservoir tank. Laboratory analysis of the hydraulic fluid did not detect any PCBs. The extent of contamination was not determined during the lift removal process and all excavated soils were returned to the excavation sites.

CONCEPTUAL SITE MODEL

The site has historically been developed for commercial use since 1946. A failure in the hydraulic system of an automotive lift has caused contamination to the soil and groundwater on the property. No other sensitive receptors appeared to be threatened and the risk to human health by direct contact or vapour intrusion from the subsurface contaminants is believed to be low. The site is served by municipal water and sewer services and there are no basement or crawlspaces throughout the building.

The surficial geology of the site is classified as Buckland Silt Loam and Lake Bottom Sediments containing silt, silty clay and clay. The nearest surface water is the Stevens Branch approximately 540 feet to the east. The flow of groundwater at the R&G Properties II, Inc. Property is demonstrated to flow the east at a gradient of 0.025 ft/ft.

Target contaminants in the groundwater are present above laboratory detection limits at four of five groundwater monitoring wells, however the concentrations are all below their respective enforcement standards. One monitoring well, located outside on the east side of the building has been found to contain Trimethylbenzenes and Naphthalene in concentrations above the respective enforcement standards.

RECEPTOR SURVEY

The immediate vicinity of the site consists of commercially developed properties. The commercial building on the subject property is of slab on grade construction with no basement or crawlspace. Although the source of contamination in this investigation originated from an in-ground lift inside the building, the risk for vapor intrusion is believed to be low. Known utility corridors near the investigation area include the municipal water supply, the municipal sewer line, a floor drain connection to the sewer line, and a storm drain line. The measured depth to groundwater versus the anticipated depths to these utilities makes the risk low.

The nearest surface water is the Stevens Branch (to the Winooski River) approximately 540 feet to the east. Considering its proximity to the source in the investigation area, the potential for petroleum impact does not seem likely.

The site and surrounding properties are serviced by the municipal water system. Based on a review of the VT Agency of Natural Resources GIS mapping for the Berlin area, four private water supply wells are located within a 0.5 mile radius of the site with the closest one being approximately 750 feet northwest of the source area. Given the supply well's distance to the source area, the potential for petroleum impact does not seem likely.

Exposure to contaminants through direct contact is also unlikely, as the contamination on this site is confined to subsurface soils and groundwater and the monitoring area is capped with either the concrete building slab or asphalt pavement in the front of the building. No evidence suggests that the contaminants have migrated off-site.

SOIL BORING & MONITORING WELL INSTALLATION

Prior to the initiation of subsurface activities at the site, a Health and Safety Plan (HASP) was prepared in accordance with Occupational Safety and Health Administration (OSHA) requirements. DigSafe Request Number 20131912956 was issued prior to the drilling activities. No underground utilities were located in the proposed drilling area.

KDAI subcontracted Environmental Products & Services of Vermont to perform the installation of five groundwater monitoring wells using a direct push Geoprobe rig on May 16, 2013. The strategy for the installation of the wells included installing three wells inside the building; a monitoring point installed in each of the locations of the two former hydraulic lift pistons, and one west of the lift to serve as an (assumed) upgradient location. Two additional wells were to be located outside the building in the (assumed) hydraulically downgradient location to the lift. Locations of each monitoring wells are indicated on the Site Investigation Map in Appendix A. KDAI pre-drilled the concrete slab inside the building for the upgradient well site using a four-inch diamond core drill. The former piston sites had been backfilled following removal but the corresponding cuts in the concrete slab were not re-poured, and therefore did not require pre-drilling.

Soil samples recovered during the borings/well installation were logged and screened for the presence of volatile organic compounds with a photoionization detector (PID) equipped with a 10.6 eV lamp. The PID was calibrated on site using an isobutylene standard gas. Soil samples were placed in self-sealing plastic bags for headspace sampling. One confirmatory soil sample was collected for laboratory analysis from each of the upgradient and downgradient boring locations from the depth of highest PID response or near the saturated zone. Laboratory analysis for VOCs was performed by Green Mountain Laboratories, Inc. using EPA Method 8260B and for Total Petroleum Hydrocarbons (TPH) via Method 8015-DRO. A Soil Sample Results Summary Table is provided in Appendix B. Laboratory analysis reports are included in Appendix C.

Each well was constructed using 1-inch PVC well materials and screened across the observed water table using standard monitoring well construction including filter sand packed screens and bentonite annulus seals. The indoor wells were not finished with permanent road boxes at grade with the concrete slab. If there is a need to maintain these wells long-term, the risers will be cut down, re-surveyed, and road box covers can be installed later. All down-hole tools were cleaned prior to use with a detergent solution followed by a clean water rinse. Each new well was subsequently developed using a peristaltic pump with dedicated tubing. The top of casing elevations of the new wells was also surveyed relative to site features. A summary of field observations is as follows:

Soil Boring / Monitoring Well MW-1

The first soil boring completed, well MW-1 was expected to provide groundwater quality information upgradient of the former lift and was located approximately 24 feet west of the former pistons. The soil profile observed at this location consisted of:

Depth	Profile	PID readings	Well Construction
0 – 0.4 feet	Concrete slab	0.0 ppm	6.0 foot well screen set with filter sand pack from 5.5 to 11.5 feet bgs. 6 foot riser installed unfinished to 0.5' above slab. Bentonite seal from 0.5 – 1.5 feet bgs. Locking well plug, but no permanent road box.
0.4 – 1.0 feet	Sandy gravel, tan	2.1 ppm	
1.0 – 4.0 feet	Dark silty sands	1.3 ppm	
4.0 – 7.5 feet	Fine sands, silty clay, becoming wet	0.6 ppm	
7.5 – 10.0 feet	Mixed sands with shale chips, wet	0.2 ppm	
10.0 – 12.0 feet	Fine, silty clay, saturated, no sheen	0.0 ppm	

Soil Boring / Monitoring Well MW-2

Well MW-2 was located outside the building approximately 30 feet east of the former lift in anticipation of providing information on the potential migration of contamination from the former hydraulic lift. The soil profile observed at this location consisted of:

Depth	Profile	PID readings	Well Construction
0 – 0.1 feet	Asphalt	0.0 ppm	6.0 foot well screen set with filter sand pack from 6.0 to 12.0 feet bgs., 5.5 foot riser installed with Bentonite seal from 0.5 – 1.5 feet bgs. Locking well plug road box cover set in concrete to matching grade.
0.1 – 1.0 feet	Crushed stone & sand fill	0.0 ppm	
1.0 – 3.5 feet	Coarse sands w/gravel	0.0 ppm	
3.5 – 7.0 feet	Dark silty sands	5.4 ppm @ 7.0'	
7.0 – 9.0 feet	Silty sands w/shale chips, becoming wet at 8.0 feet	2.1 ppm	
9.0 – 9.4 feet	Coarse sands and fine gravel	1.8 ppm	
9.4 – 11.0 feet	Sandy gravel, wet, no sheen	1.2 ppm	
11.0 – 12.0 feet	Gravelly fines, wet, no sheen	0.0 ppm	

Soil Boring / Monitoring Well MW-3

Similar to MW-2, well MW-3 was also located outside the building approximately 30 feet east of the former lift in anticipation of providing information on the potential migration of contamination from the former hydraulic lift. The soil profile observed at this location consisted of:

Depth	Profile	PID readings	Well Construction
0 – 0.1 feet	Asphalt	0.0 ppm	6.0 foot well screen set with filter sand pack from 6.0 to 12.0 feet bgs., 5.5 foot riser installed with Bentonite seal from 0.5 – 1.5 feet bgs. Locking well plug road box cover set in concrete to matching grade.
0.1 – 3.0 feet	Crushed stone & bricks (fill)	0.0 ppm	
3.0 – 4.0 feet	Silty sands	1.2 ppm	
4.0 – 7.0 feet	Mixed sands w/gravel	2.9 ppm	
7.0 – 9.0 feet	Silty sand mix, grey, becoming wet at 7.5 feet, no sheen	14.4 ppm	
9.0 – 12.0 feet	Tan soft clay	4.1 ppm	

Soil Boring / Monitoring Well MW-4

Well MW-4 was located at the site of the north hydraulic lift piston. The soil profile was not detailed during this boring because after the removal of the piston, the site was backfilled with a mix of the native material and gravel fill. Observations and well construction details at this location consisted of:

Depth	Profile	PID readings	Well Construction
0 – 4.0 feet	Mixed sands and gravel fill	0.0 ppm	6.0 foot well screen set with filter sand pack from 5.0 to 11.0 feet bgs., Solid riser installed unfinished above grade. Bentonite seal from 0.5 – 2.5 feet bgs. Locking well plug, but no permanent road box.
4.0 – 8.0 feet	Mixed sands and gravel fill	1.1 ppm	
8.0 – 10.5 feet	Mixed sands and gravel fill	12.6 ppm @9.5'	
10.5 – 12.0 feet	Silty, plastic clay, wet	0.2 ppm	

Soil Boring / Monitoring Well MW-5

Well MW-5 was located at the site of the south hydraulic lift piston. The soil profile was not detailed during this boring because after the removal of the piston, the site was backfilled with a mix of the native material and gravel fill. Observations and well construction details at this location consisted of:

Depth	Profile	PID readings	Well Construction
0 – 4.0 feet	Mixed sands and gravel fill	2.2 ppm	6.0 foot well screen set with filter sand pack from 4.8 to 10.8 feet bgs., Solid riser installed unfinished above grade. Bentonite seal from 0.5 – 1.5 feet bgs. Locking well plug, but no permanent road box.
4.0 – 8.0 feet	Mixed sands and gravel fill	3.8 ppm	
8.0 – 10.5 feet	Mixed sands and gravel fill	24.1 ppm @8.5'	
10.5 – 12.0 feet	Silty, plastic clay, wet	1.3 ppm	

GROUNDWATER SAMPLING & DATA INTERPRETATION

Groundwater sampling for these newly constructed wells was conducted on May 21, 2013. Prior to sampling, KDAI measured the elevation of groundwater in all of the monitoring wells. A summary of the measured depths to water and calculated groundwater elevations is provided in Appendix B. Free phase product was not encountered in any of the monitoring wells.

Each well was then bailed prior to collecting a water sample by removing three well volumes of groundwater to insure that representative groundwater was sampled. Groundwater samples were retrieved using disposable polyethylene bailers and placed in preserved 40 ml VOA vials and stored on ice until delivery to the laboratory. No contamination was detected in the blank sample. The laboratory results were compared to Groundwater Enforcement Standards and a Groundwater Quality Summary Table of the results is located in Appendix B. Laboratory analysis reports are included in Appendix C.

Soil sample results from the samples collected during the monitoring well installation did not contain VOC contaminants above the Residential or Industrial Soil Screening Values (SSL) at the upgradient and downgradient locations. No TPH was detected above the laboratory detection limits in these soil samples.

Contouring of the water table (using water level measurements and well casing elevations) indicates that groundwater flow across the site is primarily to the east at an approximate hydraulic gradient of 0.025 ft/ft (MW-1 to MW-2).

Target contaminant compounds were detected at all five of the sampling sites, however only one well (MW-3) had concentrations that exceeded the Groundwater Enforcement Standards (GWES). MW-1 is located hydraulically upgradient to the former hydraulic lift, and contained 5.9 ppb Naphthalene, which is below the corresponding GWES of 20 ppb. MW-2 and MW-3 serve as sample locations downgradient to the former lift. The groundwater sample from MW-2

contained detectable concentrations of Ethylbenzene, 1,3,5 Trimethylbenzene and 1,2,4 Trimethylbenzene, however all of the concentrations were below GWES. The groundwater sample from MW-3 contained a combined Trimethylbenzene concentration of 367 ppb, which is above the GWES of 350 ppb, and Naphthalene was detected at 44 ppb, also above the GWES of 20 ppb. Additional target compounds noted at MW-3 include Toluene, Ethylbenzene, Xylene, all of which were below GWES. Wells MW-4 and MW-5 are located in the former hydraulic piston sites, and contained detectable levels of Xylene, MTBE, and 1,2,4 Trimethylbenzene below the GWES. No detectable TPH-DRO concentrations were identified in any of the groundwater samples.

CONCLUSIONS & RECOMMENDATIONS

Based on information to date, we offer the following conclusions:

- With the installation of five groundwater monitoring wells in the immediate vicinity of the former hydraulic lift, the groundwater flow and gradient across the investigation area have been determined. The direction flow of groundwater across the site is at an approximate gradient of 0.025 ft/ft toward the east.
- The depth to groundwater across the study area was approximately 5 feet bgs.
- Confirmatory soil samples collected during the monitoring well installation at the upgradient and downgradient locations did not contain VOC contaminants above the Residential or Industrial Soil Screening Values (SSL). No TPH was detected above the laboratory detection limits in soil samples collected during the installation of the monitoring wells.
- No free phase product was detected in any of the monitoring wells.
- Target groundwater contaminants were detected in each of the three indoor monitoring wells, however the VOC concentrations in all of the indoor wells were all below the Vermont Groundwater Enforcement Standard (GWES). No TPH was detected above the laboratory detection limits in any of the groundwater samples from the indoor wells.
- GWES was exceeded in one of the two downgradient monitoring wells (MW-3). The combined Trimethylbenzene concentration for MW-3 was 367 ppb, just over the GWES of 350 ppb. Also, the Naphthalene concentration at MW-3 was 44 ppb, exceeding the GWES of 20 ppb. No TPH was detected above the laboratory detection limits in either of the groundwater samples from the outdoor wells.
- The degree of contamination at the former lift site appears to pose little risk to nearby surface water, drinking water supplies, and human exposure.
- The area of contamination appears localized and confined to subsurface soils and groundwater with little potential for exposure to the public.

The building is currently scheduled for renovation and re-use for commercial/retail purposes. Based on the favorable results of the soil and groundwater sampling, KDAI recommends that the three indoor wells (MW-1, MW-4 and MW-5) be permanently closed. Because one of the two exterior wells (MW-3) was found to contain target contaminants above GWES, KDAI

recommends that both exterior wells remain serviceable. Repeat sampling and analysis in six months is suggested to provide additional documentation of groundwater quality over time. We do not feel that any additional corrective actions or expanded investigation are warranted at this time. Should you have any questions, please feel free to contact me.

Respectfully,

Bryan Schultz

Enclosures

cc: Ashley Desmond, VT DEC Sites Management Section
file 97020-018

Appendix A

Area Map

Vicinity Map

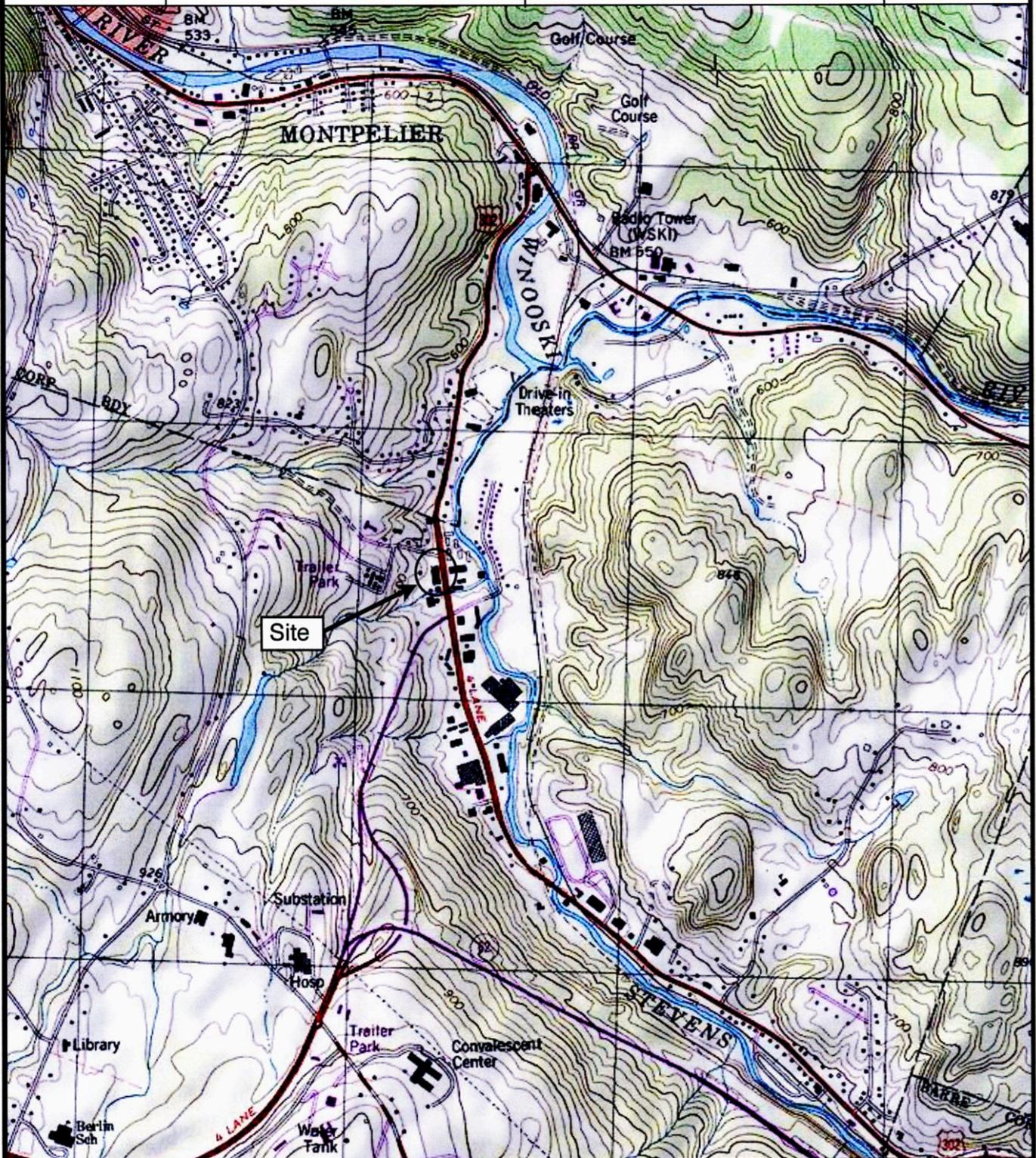
Site Investigation Area Map

Groundwater Contour Map

72°34.000' W

72°33.000' W

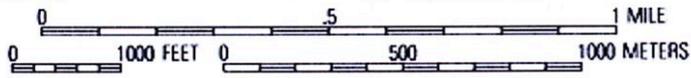
72°32.000' W



72°34.000' W

72°33.000' W

72°32.000' W



Area Map

R&G Properties II, Inc.
1755 US Route 302
Berlin, VT

SMS Site #	Date	Initial
2013-4369	6/18/13	BS





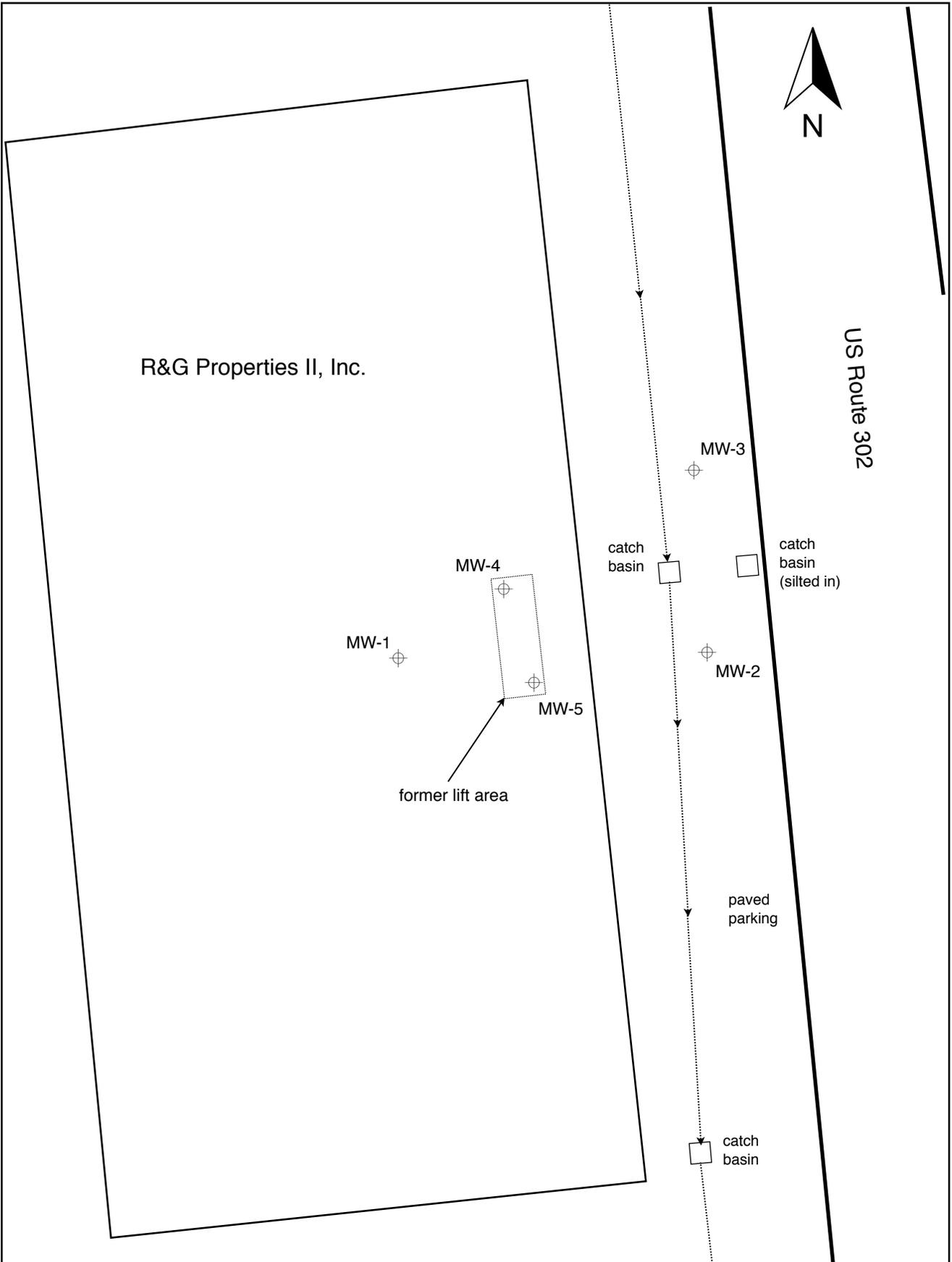
Source: Google Maps, www.Google.com

Vicinity Map

R&G Properties II, Inc.
 1755 US Route 302
 Berlin, VT

SMS Site #	Date	Initial
2013-4369	6/18/13	BS





Site Investigation Area

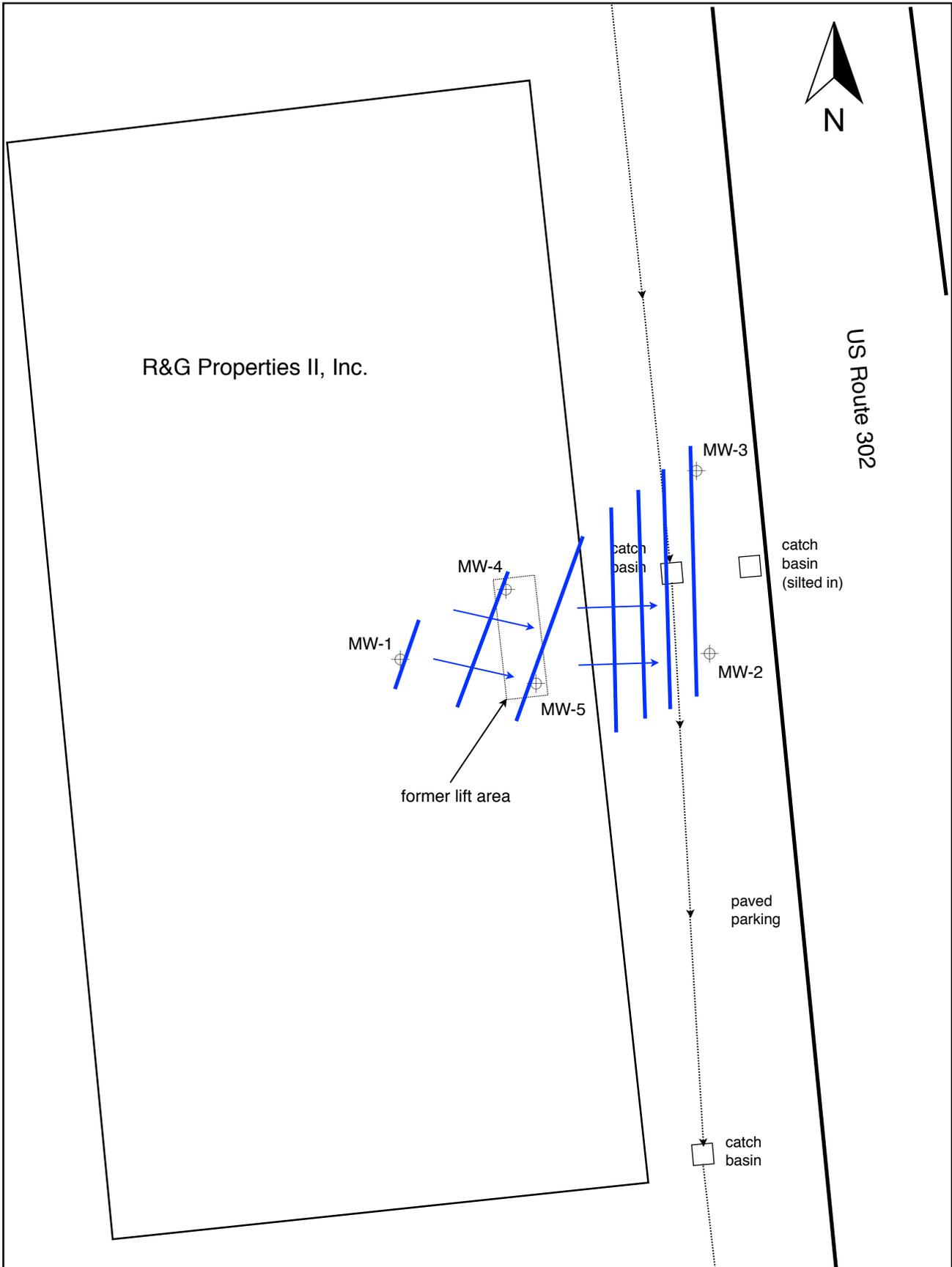
R&G Properties II, Inc. Property
1755 US Route 302
Berlin, VT

SMS Site #2013-4369

Scale: 1" = 25'

Date: 6/28/13

Initial: BS



Groundwater Contour Map

R&G Properties II, Inc. Property
1755 US Route 302
Berlin, VT

SMS Site #2013-4369
Scale: 1" = 25'
Date: 6/28/13
Initial: BS

Appendix B

Groundwater Level Elevation Data

Groundwater Quality Results Summary Table

Soil Sample Results Summary Table

Groundwater Level Elevation Data

Date: May 21, 2013

Well I.D.	Elevation (top of casing)	Depth to Groundwater	Groundwater Elevation
MW-1	100.80	4.90	95.90
MW-2	99.46	4.29	95.17
MW-3	99.53	4.39	95.14
MW-4	102.12	6.27	95.85
MW-5	102.93	7.15	95.78

Notes: All measurements given in decimal feet. Elevations are relative to the elevation of the top of the storm grate in front of the building, which was given an assigned elevation of 100.00 ft.

Groundwater Quality Results Summary Table
Sampling Date: May 21, 2013

Target Compounds	MW-1	MW-2	MW-3	MW-4	MW-5	Trip Blank	GWES (MCL)
Benzene	ND < 2	ND < 2	BPQL < 2	ND < 2	ND < 2	ND < 2	5
Toluene	ND < 2	BPQL < 2	53	ND < 2	ND < 2	BPQL < 2	1,000
Ethylbenzene	ND < 2	6	180	BPQL < 2	ND < 2	ND < 2	700
Xylene (m+p)	ND < 4	BPQL < 4	380	4.6	2.3	ND < 2	10,000
Total BTEX	ND	6	613	4.6	2.3	ND	
MTBE	ND < 5	ND < 5	ND < 5	ND < 5	8.3	ND < 5	40
1,3,5 Trimethyl Benzene	ND < 2	2.1	67	ND < 2	ND < 2	ND < 2	350 total
1,2,4 Trimethyl Benzene	ND < 2	8	300	4.2	2.4	ND < 2	
Naphthalene	5.9	ND < 5	44	ND < 5	ND < 5	ND < 5	20
1,2-Dichloroethane (1,2-DCA)	ND < 2	ND < 2	ND < 2	ND < 2	ND < 2	ND < 2	(5.0)
Ethylene Dibromide (EDB)	ND < 2	ND < 2	ND < 2	ND < 2	ND < 2	ND < 2	(0.05)
TPH (Method 8015)	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1	

Other Compounds (>BPQL)							
n-propylbenzene		10	74				
n-butylbenzene		3	19				
isopropylbenzene			21				
p-chlorotoluene			6.8				
sec-butylbenzene			4.8				
p-isopropyltoluene			6				

Notes: All Results are provided in ug/L (ppb) except for TPH which is given in mg/L (ppm)
 ND <2 = None Detected (below detection limit).
 BPQL <2 = Below Practical Quantitation Limit (detection limit).
 Red = level exceeds VT Groundwater Enforcement Standard or MCL

Soil Sample Results Summary Table
May 16, 2013

Target Compounds	SB-1 (7.5 – 8.5' bgs)	SB-2 (6.5 – 7.5' bgs)	SB-3 (7.5 – 8.0' bgs)	Soil Screening Values Residential / Industrial
Benzene	ND < 0.132	ND < 0.182	ND < 0.168	1.1 / 5.4
Toluene	ND < 0.132	BPQL < 0.182	ND < 0.168	5000 / 45000
Ethylbenzene	ND < 0.132	BPQL < 0.182	ND < 0.168	5.4 / 27
Xylene (m+p)	ND < 0.132	0.750	ND < 0.168	590 / 2500
MTBE	ND < 0.330	ND < 0.455	ND < 0.420	43 / 220
1,3,5 Trimethyl Benzene	ND < 0.132	0.360	ND < 0.168	780 / 10000
1,2,4 Trimethyl Benzene	ND < 0.132	0.850	ND < 0.168	62 / 260
Naphthalene	ND < 0.330	BPQL < 0.455	ND < 0.420	3.6 / 18
1,2-Dichloroethane (1,2-DCA)	ND < 0.132	ND < 0.182	ND < 0.168	0.43 / 2.2
Ethylene Dibromide (EDB)	ND < 0.132	ND < 0.182	ND < 0.168	0.034 / 0.17
TPH (Method 8015)	ND < 66	ND < 91	ND < 84	200 / 1000

Notes: All Results are provided in mg/Kg (ppm).

Appendix C

Laboratory Results

GREEN MOUNTAIN LABORATORIES, INC.

2 Moonlight Terrace
Montpelier, VT 05602
Phone (802) 262-2004

LABORATORY RESULTS

CLIENT NAME:	KD Associates, Inc.	GML REFERENCE NO.:	270E
ADDRESS:	41 IDX Drive, Suite 209 South Burlington, VT 05403	PROJECT NO.:	NA
SAMPLE LOCATION:	RanMar	DATE OF SAMPLE:	5/21/2013
SAMPLER:	Bryan Schultz	DATE OF RECEIPT:	5/21/2013
ATTENTION:	Bryan Shultz	DATE OF ANALYSIS:	5/29/2013
		DATE OF REPORT:	6/11/2013

Pertaining to the analyses of specimens submitted under the accompanying chain of custody form, please note the following:

- Water samples submitted for VOC analysis were preserved with HCL. The trip blank was prepared by the client with reagent water supplied by the laboratory.
- Specimens were processed and examined according to the procedures outlined in the specified method.
- Holding time were honored.
- Instruments were appropriately tuned and calibrations were checked with the frequencies required in the specified method,
- Blank contamination was not observed at levels interfering with the analytical results.
- Continuing Calibration Standards were monitored at intervals indicated in the specified method. The resulting analytical precision and accuracy were determined to be within method QA/QC acceptance limits.
- The efficiency of analyte recovery for individual samples was monitored by the addition of surrogate analyte to all samples, standards, and blanks. Surrogate recoveries were found to be within laboratory QA/QC acceptance limits, unless noted otherwise.

Reviewed by:



Raul Sanchez
Chemical Services

GREEN MOUNTAIN LABORATORIES, INC.

2 Moonlight Terrace
Montpelier, VT 05602
Phone (802) 262-2004

LABORATORY RESULTS

EPA METHOD 8260B

GML REF. # 270E
SAMPLE ID: MW-1
ANALYSIS DATE: 5/29/2013
SAMPLE TYPE: WATER

<u>PARAMETER</u>	<u>PQL (µg/L)</u>	<u>RESULT (µg/L)</u>
Dichlorodifluoromethane	5	ND
Chloromethane	5	ND
Chloroethane	2	ND
Bromomethane	5	ND
Vinyl chloride	5	ND
Trichloromonofluoromethane	5	ND
1,1-Dichloroethene	5	ND
Methylene Chloride	5	ND
trans-1,2-Dichloroethene	5	ND
Methyl t-butyl Ether (MTBE)	5	ND
1,1-Dichloroethane	5	ND
cis-1,2-Dichloroethene	5	ND
2,2-Dichloropropane	5	ND
Bromochloromethane	5	ND
Chloroform	5	ND
Carbontetrachloride	2	ND
1,1,1-Trichloroethane	5	ND
1,1-Dichloropropene	5	ND
Benzene	2	ND
1,2-Dichloroethane	2	ND
Trichloroethene	2	ND
Dibromomethane	2	ND
1,2-Dichloropropane	2	ND
Bromodichloromethane	2	ND
trans-1,3-Dichloropropene	2	ND
Toluene	2	ND
Tetrachloroethene	2	ND
cis-1,3-Dichloropropene	2	ND

GML REF. #
 SAMPLE ID:
 ANALYSIS DATE:
 SAMPLE TYPE:

270E
 MW-1
 5/29/2013
 WATER

<u>PARAMETER</u>	<u>PQL (ug/L)</u>	<u>RESULT (ug/L)</u>
1,1,2-Trichloroethane	2	ND
Dibromochloromethane	2	ND
1,3-Dichloropropane	2	ND
1,2-Dibromoethane	2	ND
Chlorobenzene	2	ND
Ethylbenzene	2	ND
1,1,1,2-Tetrachloroethane	2	ND
m+p-xylene	2	ND
o-xylene	4	ND
Styrene	2	ND
Bromoform	2	ND
isopropylbenzene	5	ND
n-propylbenzene	2	ND
1,1,2,2-Tetrachloroethane	2	ND
o-chlorotoluene	5	ND
1,3,5-Trimethylbenzene	2	ND
1,2,3-Trichloropropane	2	ND
p-chlorotoluene	5	ND
tert-butylbenzene	2	ND
1,2,4-trimethylbenzene	2	ND
sec-butylbenzene	2	ND
p-isopropyltoluene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
n-butylbenzene	2	ND
1,2-Dichlorobenzene	2	ND
1,2-Dibromo-3-Chloropropane	5	ND
Hexachlorobutadiene	5	ND
1,2,4-Trichlorobenzene	5	ND
Naphthalene	5	5.9
1,2,3-Trichlorobenzene	5	ND

Surrogates:

Dibromofluoromethane
 Toluene-d8
 4-Bromofluorobenzene

Limits

114% (86-118)
 101% (88-110)
 95% (86-115)

ND = Not Detected

BPQL = Below Practical Quantitation Limit

GREEN MOUNTAIN LABORATORIES, INC.

2 Moonlight Terrace
Montpelier, VT 05602
Phone (802) 262-2004

LABORATORY RESULTS

EPA METHOD 8260B

GML REF. # 270E
SAMPLE ID: MW-2
ANALYSIS DATE: 5/29/2013
SAMPLE TYPE: WATER

<u>PARAMETER</u>	<u>PQL (µg/L)</u>	<u>RESULT (µg/L)</u>
Dichlorodifluoromethane	5	ND
Chloromethane	5	ND
Chloroethane	2	ND
Bromomethane	5	ND
Vinyl chloride	5	ND
Trichloromonofluoromethane	5	ND
1,1-Dichloroethene	5	ND
Methylene Chloride	5	ND
trans-1,2-Dichloroethene	5	ND
Methyl t-butyl Ether (MTBE)	5	ND
1,1-Dichloroethane	5	ND
cis-1,2-Dichloroethene	5	ND
2,2-Dichloropropane	5	ND
Bromochloromethane	5	ND
Chloroform	5	ND
Carbontetrachloride	2	ND
1,1,1-Trichloroethane	5	ND
1,1-Dichloropropene	5	ND
Benzene	2	ND
1,2-Dichloroethane	2	ND
Trichloroethene	2	ND
Dibromomethane	2	ND
1,2-Dichloropropane	2	ND
Bromodichloromethane	2	ND
trans-1,3-Dichloropropene	2	ND
Toluene	2	BPQL
Tetrachloroethene	2	ND
cis-1,3-Dichloropropene	2	ND

GML REF. #
 SAMPLE ID:
 ANALYSIS DATE:
 SAMPLE TYPE:

270E
 MW-2
 5/29/2013
 WATER

<u>PARAMETER</u>	<u>PQL (µg/L)</u>	<u>RESULT (µg/L)</u>
1,1,2-Trichloroethane	2	BPQL
Dibromochloromethane	2	ND
1,3-Dichloropropane	2	ND
1,2-Dibromoethane	2	ND
Chlorobenzene	2	ND
Ethylbenzene	2	6
1,1,1,2-Tetrachloroethane	2	ND
m+p-xylene	2	14
o-xylene	4	BPQL
Styrene	2	ND
Bromoform	2	ND
isopropylbenzene	5	BPQL
n-propylbenzene	2	10
1,1,2,2-Tetrachloroethane	2	ND
o-chlorotoluene	5	ND
1,3,5-Trimethylbenzene	2	2.1
1,2,3-Trichloropropane	2	ND
p-chlorotoluene	5	ND
tert-butylbenzene	2	ND
1,2,4-trimethylbenzene	2	8
sec-butylbenzene	2	BPQL
p-isopropyltoluene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
n-butylbenzene	2	3
1,2-Dichlorobenzene	2	ND
1,2-Dibromo-3-Chloropropane	5	ND
Hexachlorobutadiene	5	ND
1,2,4-Trichlorobenzene	5	ND
Naphthalene	5	ND
1,2,3-Trichlorobenzene	5	ND

Surrogates:

	<u>Limits</u>
Dibromofluoromethane	116% (86-118)
Toluene-d8	103% (88-110)
4-Bromofluorobenzene	97% (86-115)

ND = Not Detected

BPQL = Below Practical Quantitation Limit

GREEN MOUNTAIN LABORATORIES, INC.

2 Moonlight Terrace
Montpelier, VT 05602
Phone (802) 262-2004

LABORATORY RESULTS

EPA METHOD 8260B

GML REF. #	270E
SAMPLE ID:	MW-3
ANALYSIS DATE:	5/29/2013
SAMPLE TYPE:	WATER

<u>PARAMETER</u>	<u>PQL (µg/L)</u>	<u>RESULT (µg/L)</u>
Dichlorodifluoromethane	5	ND
Chloromethane	5	ND
Chloroethane	2	ND
Bromomethane	5	ND
Vinyl chloride	5	ND
Trichloromonofluoromethane	5	ND
1,1-Dichloroethene	5	ND
Methylene Chloride	5	ND
trans-1,2-Dichloroethene	5	ND
Methyl t-butyl Ether (MTBE)	5	ND
1,1-Dichloroethane	5	ND
cis-1,2-Dichloroethene	5	ND
2,2-Dichloropropane	5	ND
Bromochloromethane	5	ND
Chloroform	5	ND
Carbontetrachloride	2	ND
1,1,1-Trichloroethane	5	ND
1,1-Dichloropropene	5	ND
Benzene	2	BPQL
1,2-Dichloroethane	2	ND
Trichloroethene	2	BPQL
Dibromomethane	2	ND
1,2-Dichloropropane	2	ND
Bromodichloromethane	2	ND
trans-1,3-Dichloropropene	2	ND
Toluene	2	53
Tetrachloroethene	2	ND
cis-1,3-Dichloropropene	2	ND

GML REF. #
 SAMPLE ID:
 ANALYSIS DATE:
 SAMPLE TYPE:

270E
 MW-3
 5/29/2013
 WATER

<u>PARAMETER</u>	<u>PQL (µg/L)</u>	<u>RESULT (µg/L)</u>
1,1,2-Trichloroethane	2	BPQL
Dibromochloromethane	2	ND
1,3-Dichloropropane	2	ND
1,2-Dibromoethane	2	ND
Chlorobenzene	2	ND
Ethylbenzene	2	180
1,1,1,2-Tetrachloroethane	2	ND
m+p-xylene	2	380
o-xylene	4	72
Styrene	2	ND
Bromoform	2	ND
isopropylbenzene	5	21
n-propylbenzene	2	74
1,1,2,2-Tetrachloroethane	2	ND
o-chlorotoluene	5	ND
1,3,5-Trimethylbenzene	2	67
1,2,3-Trichloropropane	2	ND
p-chlorotoluene	5	6.8
tert-butylbenzene	2	ND
1,2,4-trimethylbenzene	2	300
sec-butylbenzene	2	4.8
p-isopropyltoluene	2	6
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
n-butylbenzene	2	19
1,2-Dichlorobenzene	2	ND
1,2-Dibromo-3-Chloropropane	5	ND
Hexachlorobutadiene	5	ND
1,2,4-Trichlorobenzene	5	ND
Naphthalene	5	44
1,2,3-Trichlorobenzene	5	ND

Surrogates:

		<u>Limits</u>
Dibromofluoromethane	119%	(86-118)
Toluene-d8	103%	(88-110)
4-Bromofluorobenzene	98%	(86-115)

ND = Not Detected

BPQL = Below Practical Quantitation Limit

GREEN MOUNTAIN LABORATORIES, INC.

2 Moonlight Terrace
Montpelier, VT 05602
Phone (802) 262-2004

LABORATORY RESULTS

EPA METHOD 8260B

GML REF. # 270E
SAMPLE ID: MW-4
ANALYSIS DATE: 5/29/2013
SAMPLE TYPE: WATER

<u>PARAMETER</u>	<u>PQL (µg/L)</u>	<u>RESULT (µg/L)</u>
Dichlorodifluoromethane	5	ND
Chloromethane	5	ND
Chloroethane	2	ND
Bromomethane	5	ND
Vinyl chloride	5	ND
Trichloromonofluoromethane	5	ND
1,1-Dichloroethene	5	ND
Methylene Chloride	5	ND
trans-1,2-Dichloroethene	5	ND
Methyl t-butyl Ether (MTBE)	5	ND
1,1-Dichloroethane	5	ND
cis-1,2-Dichloroethene	5	ND
2,2-Dichloropropane	5	ND
Bromochloromethane	5	ND
Chloroform	5	ND
Carbontetrachloride	2	ND
1,1,1-Trichloroethane	5	ND
1,1-Dichloropropene	5	ND
Benzene	2	ND
1,2-Dichloroethane	2	ND
Trichloroethene	2	ND
Dibromomethane	2	ND
1,2-Dichloropropane	2	ND
Bromodichloromethane	2	ND
trans-1,3-Dichloropropene	2	ND
Toluene	2	ND
Tetrachloroethene	2	ND
cis-1,3-Dichloropropene	2	ND

GML REF. #
 SAMPLE ID:
 ANALYSIS DATE:
 SAMPLE TYPE:

270E
 MW-4
 5/29/2013
 WATER

<u>PARAMETER</u>	<u>PQL (µg/L)</u>	<u>RESULT (µg/L)</u>
1,1,2-Trichloroethane	2	ND
Dibromochloromethane	2	ND
1,3-Dichloropropane	2	ND
1,2-Dibromoethane	2	ND
Chlorobenzene	2	ND
Ethylbenzene	2	BPQL
1,1,1,2-Tetrachloroethane	2	ND
m+p-xylene	2	4.6
o-xylene	4	ND
Styrene	2	ND
Bromoform	2	ND
isopropylbenzene	5	ND
n-propylbenzene	2	ND
1,1,2,2-Tetrachloroethane	2	ND
o-chlorotoluene	5	ND
1,3,5-Trimethylbenzene	2	ND
1,2,3-Trichloropropane	2	ND
p-chlorotoluene	5	ND
tert-butylbenzene	2	ND
1,2,4-trimethylbenzene	2	4.2
sec-butylbenzene	2	ND
p-isopropyltoluene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
n-butylbenzene	2	ND
1,2-Dichlorobenzene	2	ND
1,2-Dibromo-3-Chloropropane	5	ND
Hexachlorobutadiene	5	ND
1,2,4-Trichlorobenzene	5	ND
Naphthalene	5	ND
1,2,3-Trichlorobenzene	5	ND

Surrogates:

Dibromofluoromethane
 Toluene-d8
 4-Bromofluorobenzene

Limits

118% (86-118)
 102% (88-110)
 97% (86-115)

ND = Not Detected

BPQL = Below Practical Quantitation Limit

GREEN MOUNTAIN LABORATORIES, INC.

2 Moonlight Terrace
Montpelier, VT 05602
Phone (802) 262-2004

LABORATORY RESULTS

EPA METHOD 8260B

GML REF. # 270E
SAMPLE ID: MW-5
ANALYSIS DATE: 5/29/2013
SAMPLE TYPE: WATER

<u>PARAMETER</u>	<u>PQL (µg/L)</u>	<u>RESULT (µg/L)</u>
Dichlorodifluoromethane	5	ND
Chloromethane	5	ND
Chloroethane	2	ND
Bromomethane	5	ND
Vinyl chloride	5	ND
Trichloromonofluoromethane	5	ND
1,1-Dichloroethene	5	ND
Methylene Chloride	5	ND
trans-1,2-Dichloroethene	5	ND
Methi t-butyl Ether (MTBE)	5	8.3
1,1-Dichloroethane	5	ND
cis-1,2-Dichloroethene	5	ND
2,2-Dichloropropane	5	ND
Bromochloromethane	5	ND
Chloroform	5	ND
Carbontetrachloride	2	ND
1,1,1-Trichloroethane	5	ND
1,1-Dichloropropene	5	ND
Benzene	2	ND
1,2-Dichloroethane	2	ND
Trichloroethene	2	ND
Dibromomethane	2	ND
1,2-Dichloropropane	2	ND
Bromodichloromethane	2	ND
trans-1,3-Dichloropropene	2	ND
Toluene	2	ND
Tetrachloroethene	2	ND
cis-1,3-Dichloropropene	2	ND

GML REF. #
 SAMPLE ID:
 ANALYSIS DATE:
 SAMPLE TYPE:

270E
 MW-5
 5/29/2013
 WATER

<u>PARAMETER</u>	<u>PQL (µg/L)</u>	<u>RESULT (µg/L)</u>
1,1,2-Trichloroethane	2	ND
Dibromochloromethane	2	ND
1,3-Dichloropropane	2	ND
1,2-Dibromoethane	2	ND
Chlorobenzene	2	ND
Ethylbenzene	2	ND
1,1,1,2-Tetrachloroethane	2	ND
m+p-xylene	2	2.3
o-xylene	4	ND
Styrene	2	ND
Bromoform	2	ND
isopropylbenzene	5	ND
n-propylbenzene	2	ND
1,1,2,2-Tetrachloroethane	2	ND
o-chlorotoluene	5	ND
1,3,5-Trimethylbenzene	2	ND
1,2,3-Trichloropropane	2	ND
p-chlorotoluene	5	ND
tert-butylbenzene	2	ND
1,2,4-trimethylbenzene	2	2.4
sec-butylbenzene	2	ND
p-isopropyltoluene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
n-butylbenzene	2	ND
1,2-Dichlorobenzene	2	ND
1,2-Dibromo-3-Chloropropane	5	ND
Hexachlorobutadiene	5	ND
1,2,4-Trichlorobenzene	5	ND
Naphthalene	5	ND
1,2,3-Trichlorobenzene	5	ND

Surrogates:

Dibromofluoromethane
 Toluene-d8
 4-Bromofluorobenzene

Limits

118% (86-118)
 102% (88-110)
 97% (86-115)

ND = Not Detected

BPQL = Below Practical Quantitation Limit

GREEN MOUNTAIN LABORATORIES, INC.

2 Moonlight Terrace
Montpelier, VT 05602
Phone (802) 262-2004

LABORATORY RESULTS

EPA METHOD 8260B

GML REF. #	270E
SAMPLE ID:	TRIP BLANK
ANALYSIS DATE:	5/29/2013
SAMPLE TYPE:	WATER

<u>PARAMETER</u>	<u>PQL (µg/L)</u>	<u>RESULT (µg/L)</u>
Dichlorodifluoromethane	5	ND
Chloromethane	5	ND
Chloroethane	2	ND
Bromomethane	5	ND
Vinyl chloride	5	ND
Trichloromonofluoromethane	5	ND
1,1-Dichloroethene	5	ND
Methylene Chloride	5	ND
trans-1,2-Dichloroethene	5	ND
Methyl t-butyl Ether (MTBE)	5	ND
1,1-Dichloroethane	5	ND
cis-1,2-Dichloroethene	5	ND
2,2-Dichloropropane	5	ND
Bromochloromethane	5	ND
Chloroform	5	ND
Carbontetrachloride	2	ND
1,1,1-Trichloroethane	5	ND
1,1-Dichloropropene	5	ND
Benzene	2	ND
1,2-Dichloroethane	2	ND
Trichloroethene	2	ND
Dibromomethane	2	ND
1,2-Dichloropropane	2	ND
Bromodichloromethane	2	ND
trans-1,3-Dichloropropene	2	ND
Toluene	2	BPQL
Tetrachloroethene	2	ND
cis-1,3-Dichloropropene	2	ND

GML REF. #
SAMPLE ID:
ANALYSIS DATE:
SAMPLE TYPE:

270E
TRIP BLANK
5/29/2013
WATER

<u>PARAMETER</u>	<u>PQL (µg/L)</u>	<u>RESULT (µg/L)</u>
1,1,2-Trichloroethane	2	ND
Dibromochloromethane	2	ND
1,3-Dichloropropane	2	ND
1,2-Dibromoethane	2	ND
Chlorobenzene	2	ND
Ethylbenzene	2	ND
1,1,1,2-Tetrachloroethane	2	ND
m+p-xylene	2	ND
o-xylene	4	ND
Styrene	2	ND
Bromoform	2	ND
isopropylbenzene	5	ND
n-propylbenzene	2	ND
1,1,2,2-Tetrachloroethane	2	ND
o-chlorotoluene	5	ND
1,3,5-Trimethylbenzene	2	ND
1,2,3-Trichloropropane	2	ND
p-chlorotoluene	5	ND
tert-butylbenzene	2	ND
1,2,4-trimethylbenzene	2	ND
sec-butylbenzene	2	ND
p-isopropyltoluene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
n-butylbenzene	2	ND
1,2-Dichlorobenzene	2	ND
1,2-Dibromo-3-Chloropropane	5	ND
Hexachlorobutadiene	5	ND
1,2,4-Trichlorobenzene	5	ND
Naphthalene	5	ND
1,2,3-Trichlorobenzene	5	ND

Surrogates:

	<u>Limits</u>
Dibromofluoromethane	118% (86-118)
Toluene-d8	102% (88-110)
4-Bromofluorobenzene	96% (86-115)

ND = Not Detected

BPQL = Below Practical Quantitation Limit

Green Mountain Laboratories, Inc.

2 Moonlight Terrace
Montpelier, Vermont 05602

Phone: (802) 262-2004

www.greenmtlabs.com

LABORATORY RESULTS

CLIENT NAME:	K-D Associates, Inc.	GML REFERENCE #:	270E
CLIENT ADDRESS:	41 IDX Drive, Suite 209 South Burlington, VT 05403	PROJECT NO:	NA
SAMPLE LOCATION:	RanMar	DATE OF SAMPLE:	5/21/2013
SAMPLER:	Bryan Schultz	DATE OF RECEIPT:	5/21/2013
ATTENTION:	Bryan Schultz	DATE OF ANALYSIS:	5/29/2013
		DATE OF REPORT:	6/11/2013

Total Petroleum Hydrocarbons (TPH) by EPA Method 8015 DRO (mg/L – ppm)

Sample	PQL	Result
MW-1	1.0	<1.0
MW-2	1.0	<1.0
MW-3	1.0	<1.0
MW-4	1.0	<1.0
MW-5	1.0	<1.0
TRIP BLANK	1.0	<1.0

PQL= Practical Quantitation Limit
BPQL= Below Practical Quantitation Limit

Reviewed by:



Raul Sanchez
Chemical Services

Green Mountain Laboratories, Inc.
 2 Moonlight Terrace
 Montpelier, Vermont 05602
 Phone (802) 262-2004 Fax (802) 262-2005
 www.greenmtlabs.com

Client Name: *KD Associates Inc.*
 Address: *41 Box Dr. Ste 208 S. Guil. 05403*
 Phone / Fax: *802-862-7790 802-660-2462*
 Project Name: *RanMar*
 Project Number:
 Project Manager: *Bryan Schultz*

#	Sample Location	Date	Time	# of Cont.	Pres.	Sample Type	Analysis Requested				Remarks								
1	MW-1	5/21/13		2	KCL	water	✓	✓	8260	8015-DR0									
2	MW-2						✓	✓											
3	MW-3						✓	✓											
4	MW-4						✓	✓											
5	MW-5						✓	✓											
6	Trip blank						✓	✓											

*Digital Copy Requested by *bryan@kdasoassociatesinc.com*
 Chain of Custody

Relinquished By: *Bryan Sch* Date/Time: *5/21/13* Received By: *B. Schultz* Date/Time: *5-21-13*

Relinquished By: *Bryan Sch* Date/Time: *5/21/13* Received By: *B. Schultz* Date/Time: *5-21-13*

Temperature Blank: *33* Vial Lot ID #: *33*

GML # *206E*

GREEN MOUNTAIN LABORATORIES, INC.

2 Moonlight Terrace
Montpelier, VT 05602
Phone (802) 262-2004

LABORATORY RESULTS

CLIENT NAME:	KD Associates, Inc.	GML REFERENCE NO.:	246E
ADDRESS:	41 IDX Drive, Suite 209 South Burlington, VT 05403	PROJECT NO.:	NA
SAMPLE LOCATION:	Ran Mar	DATE OF SAMPLE:	5/16/2013
SAMPLER:	Bryan Schultz	DATE OF RECEIPT:	5/16/2013
ATTENTION:	Bryan Schultz	DATE OF ANALYSIS:	5/29/2013
		DATE OF REPORT:	6/11/2013

Pertaining to the analyses of specimens submitted under the accompanying chain of custody form, please note the following:

- Specimens were processed and examined according to the procedures outlined in the specified method.
- Holding time were honored.
- Instruments were appropriately tuned and calibrations were checked with the frequencies required in the specified method,
- Blank contamination was not observed at levels interfering with the analytical results.
- Continuing Calibration Standards were monitored at intervals indicated in the specified method. The resulting analytical precision and accuracy were determined to be within method QA/QC acceptance limits.
- The efficiency of analyte recovery for individual samples was monitored by the addition of surrogate analyte to all samples, standards, and blanks. Surrogate recoveries were found to be within laboratory QA/QC acceptance limits, unless noted otherwise.

Reviewed by:



Raul Sanchez
Chemical Services

GREEN MOUNTAIN LABORATORIES, INC.

2 Moonlight Terrace
Montpelier, VT 05602
Phone (802) 262-2004

LABORATORY RESULTS

EPA METHOD 8260B

GML REF. # 246E
SAMPLE ID: SB-1
ANALYSIS DATE: 5/29/2013
SAMPLE TYPE: SOIL

<u>PARAMETER</u>	<u>PQL (µg/Kg)</u>	<u>RESULT (µg/Kg)</u>
Dichlorodifluoromethane	330	ND
Chloromethane	330	ND
Chloroethane	132	ND
Bromomethane	330	ND
Vinyl chloride	330	ND
Trichloromonofluoromethane	330	ND
1,1-Dichloroethene	330	ND
Methylene Chloride	330	ND
trans-1,2-Dichloroethene	330	ND
Methi t-butyl Ether (MTBE)	330	ND
1,1-Dichloroethane	330	ND
cis-1,2-Dichloroethene	330	ND
2,2-Dichloropropane	330	ND
Bromochloromethane	330	ND
Chloroform	330	ND
Carbontetrachloride	132	ND
1,1,1-Trichloroethane	330	ND
1,1-Dichloropropene	330	ND
Benzene	132	ND
1,2-Dichloroethane	132	ND
Trichloroethene	132	ND
Dibromomethane	132	ND
1,2-Dichloropropane	132	ND
Bromodichloromethane	132	ND
trans-1,3-Dichloropropene	132	ND
Toluene	132	ND
Tetrachloroethene	132	ND
cis-1,3-Dichloropropene	132	ND

GML REF. #	246E
SAMPLE ID:	SB-1
ANALYSIS DATE:	5/29/2013
SAMPLE TYPE:	SOIL

PARAMETER	PQL (µg/Kg)	RESULT (µg/Kg)
1,1,2-Trichloroethane	132	ND
Dibromochloromethane	132	ND
1,3-Dichloropropane	132	ND
1,2-Dibromoethane	132	ND
Chlorobenzene	132	ND
Ethylbenzene	132	ND
1,1,1,2-Tetrachloroethane	132	ND
m+p-xylene	132	ND
o-xylene	264	ND
Styrene	132	ND
Bromoform	132	ND
isopropylbenzene	330	ND
n-propylbenzene	132	ND
1,1,2,2-Tetrachloroethane	132	ND
o-chlorotoluene	330	ND
1,3,5-Trimethylbenzene	132	ND
1,2,3-Trichloropropane	132	ND
p-chlorotoluene	330	ND
tert-butylbenzene	132	ND
1,2,4-trimethylbenzene	132	ND
sec-butylbenzene	132	ND
p-isopropyltoluene	132	ND
1,3-Dichlorobenzene	132	ND
1,4-Dichlorobenzene	132	ND
n-butylbenzene	132	ND
1,2-Dichlorobenzene	132	ND
1,2-Dibromo-3-Chloropropane	330	ND
Hexachlorobutadiene	330	ND
1,2,4-Trichlorobenzene	330	ND
Naphthalene	330	ND
1,2,3-Trichlorobenzene	330	ND

Surrogates:

	<u>Limits</u>
Dibromofluoromethane	108% (80-120)
Toluene-d8	101% (81-117)
4-Bromofluorobenzene	97% (74-121)

ND = Not Detected

BPQL = Below Practical Quantitation Limit

GML REF. #	246E
SAMPLE ID:	SB-2
ANALYSIS DATE:	5/29/2013
SAMPLE TYPE:	SOIL

<u>PARAMETER</u>	<u>PQL (µg/Kg)</u>	<u>RESULT (µg/Kg)</u>
1,1,2-Trichloroethane	182	ND
Dibromochloromethane	182	ND
1,3-Dichloropropane	182	ND
1,2-Dibromoethane	182	ND
Chlorobenzene	182	ND
Ethylbenzene	182	BPQL
1,1,1,2-Tetrachloroethane	182	ND
m+p-xylene	182	750
o-xylene	364	BPQL
Styrene	182	ND
Bromoform	182	ND
isopropylbenzene	455	ND
n-propylbenzene	182	BPQL
1,1,2,2-Tetrachloroethane	182	ND
o-chlorotoluene	455	ND
1,3,5-Trimethylbenzene	182	360
1,2,3-Trichloropropane	182	ND
p-chlorotoluene	455	ND
tert-butylbenzene	182	ND
1,2,4-trimethylbenzene	182	850
sec-butylbenzene	182	ND
p-isopropyltoluene	182	ND
1,3-Dichlorobenzene	182	ND
1,4-Dichlorobenzene	182	ND
n-butylbenzene	182	BPQL
1,2-Dichlorobenzene	182	ND
1,2-Dibromo-3-Chloropropane	455	ND
Hexachlorobutadiene	455	ND
1,2,4-Trichlorobenzene	455	ND
Naphthalene	455	BPQL
1,2,3-Trichlorobenzene	455	ND

Surrogates:

	<u>Limits</u>
Dibromofluoromethane	106% (80-120)
Toluene-d8	102% (81-117)
4-Bromofluorobenzene	98% (74-121)

ND = Not Detected

BPQL = Below Practical Quantitation Limit

GREEN MOUNTAIN LABORATORIES, INC.

2 Moonlight Terrace
Montpelier, VT 05602
Phone (802) 262-2004

LABORATORY RESULTS

EPA METHOD 8260B

GML REF. # 246E
SAMPLE ID: SB-2
ANALYSIS DATE: 5/29/2013
SAMPLE TYPE: SOIL

<u>PARAMETER</u>	<u>PQL (µg/Kg)</u>	<u>RESULT (µg/Kg)</u>
Dichlorodifluoromethane	455	ND
Chloromethane	455	ND
Chloroethane	182	ND
Bromomethane	455	ND
Vinyl chloride	455	ND
Trichloromonofluoromethane	455	ND
1,1-Dichloroethene	455	ND
Methylene Chloride	455	ND
trans-1,2-Dichloroethene	455	ND
Methl t-butyl Ether (MTBE)	455	ND
1,1-Dichloroethane	455	ND
cis-1,2-Dichloroethene	455	ND
2,2-Dichloropropane	455	ND
Bromochloromethane	455	ND
Chloroform	455	ND
Carbontetrachloride	182	ND
1,1,1-Trichloroethane	455	ND
1,1-Dichloropropene	455	ND
Benzene	182	ND
1,2-Dichloroethane	182	ND
Trichloroethene	182	ND
Dibromomethane	182	ND
1,2-Dichloropropane	182	ND
Bromodichloromethane	182	ND
trans-1,3-Dichloropropene	182	ND
Toluene	182	BPQL
Tetrachloroethene	182	ND
cis-1,3-Dichloropropene	182	ND

GML REF. #
 SAMPLE ID:
 ANALYSIS DATE:
 SAMPLE TYPE:

246E
 SB-2
 5/29/2013
 SOIL

<u>PARAMETER</u>	<u>PQL (µg/Kg)</u>	<u>RESULT (µg/Kg)</u>
1,1,2-Trichloroethane	182	ND
Dibromochloromethane	182	ND
1,3-Dichloropropane	182	ND
1,2-Dibromoethane	182	ND
Chlorobenzene	182	ND
Ethylbenzene	182	BPQL
1,1,1,2-Tetrachloroethane	182	ND
m+p-xylene	182	750
o-xylene	364	BPQL
Styrene	182	ND
Bromoform	182	ND
isopropylbenzene	455	ND
n-propylbenzene	182	BPQL
1,1,2,2-Tetrachloroethane	182	ND
o-chlorotoluene	455	ND
1,3,5-Trimethylbenzene	182	360
1,2,3-Trichloropropane	182	ND
p-chlorotoluene	455	ND
tert-butylbenzene	182	ND
1,2,4-trimethylbenzene	182	850
sec-butylbenzene	182	ND
p-isopropyltoluene	182	ND
1,3-Dichlorobenzene	182	ND
1,4-Dichlorobenzene	182	ND
n-butylbenzene	182	BPQL
1,2-Dichlorobenzene	182	ND
1,2-Dibromo-3-Chloropropane	455	ND
Hexachlorobutadiene	455	ND
1,2,4-Trichlorobenzene	455	ND
Naphthalene	455	BPQL
1,2,3-Trichlorobenzene	455	ND

Surrogates:

Dibromofluoromethane
 Toluene-d8
 4-Bromofluorobenzene

Limits

106% (80-120)
 102% (81-117)
 98% (74-121)

ND = Not Detected

BPQL = Below Practical Quantitation Limit

GREEN MOUNTAIN LABORATORIES, INC.

2 Moonlight Terrace
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LABORATORY RESULTS

EPA METHOD 8260B

GML REF. # 246E
SAMPLE ID: SB-3
ANALYSIS DATE: 5/29/2013
SAMPLE TYPE: SOIL

<u>PARAMETER</u>	<u>PQL (µg/Kg)</u>	<u>RESULT (µg/Kg)</u>
Dichlorodifluoromethane	420	ND
Chloromethane	420	ND
Chloroethane	168	ND
Bromomethane	420	ND
Vinyl chloride	420	ND
Trichloromonofluoromethane	420	ND
1,1-Dichloroethene	420	ND
Methylene Chloride	420	ND
trans-1,2-Dichloroethene	420	ND
Methl t-butyl Ether (MTBE)	420	ND
1,1-Dichloroethane	420	ND
cis-1,2-Dichloroethene	420	ND
2,2-Dichloropropane	420	ND
Bromochloromethane	420	ND
Chloroform	420	ND
Carbontetrachloride	168	ND
1,1,1-Trichloroethane	420	ND
1,1-Dichloropropene	420	ND
Benzene	168	ND
1,2-Dichloroethane	168	ND
Trichloroethene	168	ND
Dibromomethane	168	ND
1,2-Dichloropropane	168	ND
Bromodichloromethane	168	ND
trans-1,3-Dichloropropene	168	ND
Toluene	168	ND
Tetrachloroethene	168	ND
cis-1,3-Dichloropropene	168	ND

GML REF. #
SAMPLE ID:
ANALYSIS DATE:
SAMPLE TYPE:

246E
SB-3
5/29/2013
SOIL

<u>PARAMETER</u>	<u>PQL (µg/Kg)</u>	<u>RESULT (µg/Kg)</u>
1,1,2-Trichloroethane	168	ND
Dibromochloromethane	168	ND
1,3-Dichloropropane	168	ND
1,2-Dibromoethane	168	ND
Chlorobenzene	168	ND
Ethylbenzene	168	ND
1,1,1,2-Tetrachloroethane	168	ND
m+p-xylene	168	ND
o-xylene	336	ND
Styrene	168	ND
Bromoform	168	ND
isopropylbenzene	420	ND
n-propylbenzene	168	ND
1,1,1,2-Tetrachloroethane	168	ND
o-chlorotoluene	420	ND
1,3,5-Trimethylbenzene	168	ND
1,2,3-Trichloropropane	168	ND
p-chlorotoluene	420	ND
tert-butylbenzene	168	ND
1,2,4-trimethylbenzene	168	ND
sec-butylbenzene	168	ND
p-isopropyltoluene	168	ND
1,3-Dichlorobenzene	168	ND
1,4-Dichlorobenzene	168	ND
n-butylbenzene	168	ND
1,2-Dichlorobenzene	168	ND
1,2-Dibromo-3-Chloropropane	420	ND
Hexachlorobutadiene	420	ND
1,2,4-Trichlorobenzene	420	ND
Naphthalene	420	ND
1,2,3-Trichlorobenzene	420	ND

Surrogates:

Dibromofluoromethane
Toluene-d8
4-Bromofluorobenzene

Limits
108% (80-120)
101% (81-117)
98% (74-121)

ND = Not Detected

BPQL = Below Practical Quantitation Limit

Green Mountain Laboratories, Inc.

2 Moonlight Terrace
Montpelier, Vermont 05602

Phone: (802) 262-2004

www.greenmtlabs.com

LABORATORY RESULTS

CLIENT NAME:	K-D Associates, Inc.	GML REFERENCE #:	264E
CLIENT ADDRESS:	41 IDX Drive, Suite 209 South Burlington, VT 05403	PROJECT NO:	NA
SAMPLE LOCATION:	RanMar	DATE OF SAMPLE:	5/16/2013
SAMPLER:	Bryan Schultz	DATE OF RECEIPT:	5/16/2013
ATTENTION:	Bryan Schultz	DATE OF ANALYSIS:	5/29/2013
		DATE OF REPORT:	6/11/2013

Total Petroleum Hydrocarbons (TPH) by EPA Method 8015 DRO (mg/Kg – ppm)

Sample	PQL	Result
SB-1	66	<66
SB-2	91	<91
SB-3	84	<84

PQL= Practical Quantitation Limit
BPQL= Below Practical Quantitation Limit

Reviewed by:



Raul Sanchez
Chemical Services

Green Mountain Laboratories, Inc.

2 Moonlight Terrace
 Montpelier, Vermont 05602
 Phone (802) 262-2004 Fax (802) 262-2005
 www.greenmtlabs.com

Client Name: *KD ASSOCIATES, Inc.*

Address: *41 IDX Drive, Sta 209, S. Burl, VT 05603*

Phone / Fax: *862-862-7490 802-660-2462*

Project Name: *Ran Mar*

Project Number:

Project Manager: *Bryan Schultz*

Sampler:

Sample Location

Date

Time

of Cont.

Pres.

Sample Type

Analysis Requested

Page

GML #

Remarks

1 *SB-1* *5-16-13* *09:00* *2* *ICE* *Soil* *✓* *8260* *8015-DRO* *✓* *✓* *✓*

2 *SB-2* *10:30* *11:30* *✓* *✓* *✓*

3 *SB-3*

Relinquished By: *Bryan Schultz* Date/Time: *5/16/13, 12:35* Received By: *[Signature]* Date/Time: *5/16/13, 12:35*

Temperature Blank: Val Lot ID #:

Digital Copy Requested *bryan@kdassociatesinc.com* Chain of Custody

