

ENVIRONMENTAL CONSULTING & MANAGEMENT
ROUX ASSOCIATES INC



209 SHAFTER STREET
ISLANDIA, NEW YORK 11749 TEL 631-232-2600 FAX 631-232-9898

March 11, 2013

Mr. Jeffrey Dyber
Environmental Engineer 2
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau A, 11th Floor
625 Broadway
Albany, New York 12233-7015

Re: Soil Vapor Work Plan
Former Avis Headquarters Site – BCP Site No. C130206
900 Old Country Road, Garden City, New York

Dear Mr Dyber:

Since issuance of the Certificate of Completion (COC) at the Former Avis Headquarters Site in Garden City, Roux Associates has been conducting quarterly soil vapor monitoring, consistent with the soil vapor remedy specified in the Remedial Action Work Plan. The monitoring consists of quarterly soil vapor intrusion monitoring (sub slab and indoor air) in three stores on the Site, as shown on Figure 1. To date, four quarterly rounds of soil vapor monitoring have been completed. The sub slab and indoor air sampling results for trichloroethene (TCE) and tetrachloroethene (PCE), the primary compounds of concern at the site, are summarized on Figure 1.

As reflected in the data summary, only the sub slab soil vapor monitoring data collected below the currently vacant Retail D space would require any further action pursuant to the decision matrices presented in the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006) (NYSDOH Guidance). Although the slightly elevated soil vapor levels pose no threat to public health or safety, Roux proposes a limited sampling plan to delineate the extent of the elevated vapors below Retail D and then to conduct soil vapor extraction (SVE) to eliminate them. At this time, Retail D is vacant, so conducting the proposed work would avoid interference with future tenant operations and will ensure that soil vapor levels are achieved within the five-year time frame required for Track 1 cleanups.

The relevant data for Retail D is presented in detail below.

Analyte	Date	IAD-1/IAD-2 Indoor Air Concentration ($\mu\text{g}/\text{m}^3$)	SVD-1 Sub-slab Concentration ($\mu\text{g}/\text{m}^3$)	Required Action Per NYSDOH Guidance
PCE	3/20/12	IAD-1 — 0.4	26	NFA
	6/12/12	IAD-1 — 1.9	882	Monitor
	7/19/12	IAD-1 — 0.56 IAD-2 — 1.2	483	Monitor
	9/6/12	IAD-2 — 0.58	834	Monitor
	12/10/12	IAD-2 — 0.56	1320	Mitigate
	1/17/13	IAD-2 — 0.51	560	Monitor
TCE	3/20/12	IAD-1 — ND	9.7	NFA
	6/12/12	IAD-1 — 0.37	76.9	Monitor/Mitigate
	7/19/12	IAD-1 — ND IAD-2 — ND	23	NFA
	9/6/12	IAD-1 — ND	69.3	Monitor
	12/10/12	IAD-1 — ND	84.4	Monitor
	1/17/13	IAD-1 — ND	27	NFA

The sub-slab sample results indicate elevated PCE and, to a lesser extent, TCE concentrations, as compared to the NYSDOH Guidance. The sub-slab/indoor air samples for PCE taken on December 10, 2012 produced a “Mitigate” recommended action based on NYSDOH Matrix 2, and the sub-slab/indoor air samples for TCE taken on June 12, 2012 produced a “Monitor/Mitigate” recommended action based on NYSDOH Matrix 1. These results were not expected, given the lack of detected VOC concentrations in soil vapor sampling conducted in this area during the Remedial Investigation (RI) and the significant remedial soil excavation conducted in this area during the soil remedy. Sub slab samples from adjacent sampling points in Retail C and Retail E (see Figure 1) indicate that the extent of the elevated soil vapor concentrations is limited and localized beneath Retail D.

Recommended Soil Vapor Work Plan

Based on the recurring nature of the sub slab soil vapor concentrations and the current vacancy of the Retail D space, Roux Associates recommends the installation of a short-term engineering control designed to permanently eliminate the low level, localized

sub-slab soil vapor concentrations. Roux Associates proposes initially to deploy a grid of Gore® Modules (soil vapor screening samplers) to identify the area of highest sub-slab vapor concentrations and determine the optimal locations to install two to four soil vapor extraction (SVE) wells. Figure 2 shows area where the Gore samplers and the SVE system will be installed. The proposed Gore sampling program and details of the SVE system design and operation are presented below.

Gore® Module Installation

Gore® Modules will be used to screen and characterize soil vapor concentrations beneath and in the vicinity of Retail D. The passive soil vapor sampling technology used by the Gore® Modules is well suited to efficiently delineate the extent of soil vapor impacts based on a dense grid of sampling points. This technology was successfully used during the soil vapor investigation conducted during the RI at this site. As shown on Figure 2, a grid of 15 Gore® Module locations is planned for installation. These will be placed in approximately 15-foot on-center spacing within Retail Space D and the adjoining parking lot/loading dock area (Figure 2).

Each Gore® Module will be installed in a one-inch diameter hole drilled through the building slab or asphalt parking lot surface. The samplers will be installed at the same depth relative to the water table. Depth to groundwater at the site is approximately 20 feet. The Gore samplers will be installed approximately 15 feet above the water table which is five feet below the Retail D floor slab and one foot below the parking lot assuming a four foot change in grade. A dedicated Gore® Module will be installed within each borehole, capped with a sealing device, and left in place for 5 days per the manufacturer's specifications. Following the required exposure period, the Gore® Module will be retrieved and submitted to Gore® Technologies for analysis under standard chain of custody procedures. The Gore® Modules will be analyzed for VOCs using EPA Method 8260 protocol.

SVE System Design and Air Permitting

The SVE system will be designed by our associated engineering firm, Remedial Engineering , P.C. and will consist of two to four SVE extraction wells depending on the delineated extent of TCE and PCE vapors. Each SVE well will be equipped with manual control valves and a sample port. The SVE wells will be manifolded together using aboveground piping which will be connected directly to a 1.5 Hp regenerative blower. The blower will be vented externally through a stack that will extend further than five feet above the building roofline. SVE well spacing will be designed to provide complete pneumatic coverage of the targeted portion of the Retail D Space. This will be verified during system startup using empirical pneumatic data.

Emissions from the SVE system will not be discharged untreated without NYSDEC approval. Using empirical soil vapor and groundwater sample results from this portion of the site, Roux Associates will submit the calculated VOC concentration of the SVE discharge for NYSDEC review prior to system startup. Based on our preliminary calculations, it is estimated that the air discharge from the SVE system will not exceed Air Guide 1 guidance values and will support that treatment is not needed for SVE emissions. During start-up of the SVE system, an effluent air sample will be collected using a Summa canister and analyzed using USEPA TO-15 to verify the preliminary calculations and the lack of a need for treatment.

SVE System Operations

The operational plan for the system will include weekly measurement of individual well and cumulative system effluent VOC concentrations using a PID. Individual well pneumatic measurements will also be collected to evaluate each wells radius of influence. The SVE system will be operated continuously until individual well and total system effluent concentrations stabilize over a two to four week period with no further reduction occurring. The system will then be shut off for one to two weeks. The system will be restarted and operated in a pulsed fashion until effluent plateaus are again reached. When no further VOC reduction is achieved through pulsed operation, the system will be shut off.

Based on Roux Associates' experience operating SVE systems at sites with similar contaminants at comparable concentrations, it is expected that operations will be completed within 3 to 6 months, well within the 5-year period that is permissible under a Track 1 cleanup as defined in 6 NYCRR § 375-3.8(e)(1)(iv).

During the operation of the Retail D SVE system, the soil vapor monitoring program for Retail Spaces E and F will continue as detailed in the RAWP. Upon termination of the SVE system operation, the quarterly soil vapor monitoring program will resume in Retail D until four quarters of data have been collected that indicate No Further Action is required based on NYSDOH guidance.

Schedule

The proposed schedule for the tasks described above is as follows assuming a start date of March 25, 2013.

• Gore sampler installation	March 25 - 27, 2013
• Gore sampler retrieval	April 1, 2013
• Receipt of soil vapor data	April 19, 2013

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• Installation of SVE system	April 29- May 10, 2013
• Initiate SVE operations	May 13, 2013
• Anticipated operating period	May 13- September 13, 2013
• Preliminary system shut down/pulsed operation	September 16- Nov. 1, 2013
• Final System shutdown/resume quarterly vapor monitoring	November 15, 2013

If you have any questions concerning this submittal, please contact us at (631) 232-2600.

Sincerely,

ROUX ASSOCIATES, INC.



Craig A. Werle, P.G.
Principal Hydrogeologist

Attachments

cc: Mark Chertok/Jennifer Coghlan, Sive, Paget & Riesel, P.C.
Mike Berfield, Equity One, Inc.
Steve Karpinski, NYSDOH

Certification by Remedial Engineering, P.C.

I, Charles J. McGuckin, P.E., certify that I am currently a NYS registered professional engineer and that this Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Charles J. McGuckin, P.E.

NYS Professional Engineer #069509

3/11/13

Date



OLD COUNTRY ROAD

REFERENCES

BOUNDARY & TOPOGRAPHIC SURVEY, EQUITY ONE, LLC, OLD COUNTRY ROAD @ EAST GATE & ZECKENDORF BOULEVARD, LOTS 26, 27 & 28, BLOCK 67, SECTION 44, GARDEN CITY, TOWN OF HEMPSTEAD, NASSAU COUNTY, STATE OF NEW YORK, PREPARED BY CONTROL POINT ASSOCIATES, INC., REVISED 3/08/2011.

LEGEND

— — — — —	PROPERTY LINE
	EXISTING BUILDING LINE AT GROUND LEVEL
— — — — —	FORMER BUILDING LINE PER REF. #1
	UNDERGROUND PARKING GARAGE
SVE-1 	SUB SLAB VAPOR MONITORING POINT
IAD-032012 	INDOOR AIR/AMBIENT AIR SAMPLE LOCATION

TYPICAL DATABOX INFORMATION

WELL DESIGNATION		SUBSLAB SOIL VAPOR		SAMPLING DATE	
SVC-3		1/17/13			
Trichloroethene		7.5			
CONCENTRATIONS					

DATA COMPARED TO THE NYSDOH SOIL VAPOR
INTRUSION GUIDANCE MATRICES (1 AND 2)

**BOLD DATA INDICATES PARAMETER DETECTED
ABOVE MONITOR THRESHOLD**

RED DATA INDICATES PARAMETER DETECTED ABOVE MITIGATION THRESHOLD

BOLD/SHADED DATA INDICATES PARAMETER
DETECTED ABOVE MONITOR/MITIGATE THRESHOLD

* – INDICATES THAT PARAMETER DETECTED ABOVE
TAKE REASONABLE AND PRACTICAL ACTIONS TO
IDENTIFY SOURCE(S) AND REDUCE EXPOSURES
THRESHOLD

NYSDOH - NEW YORK STATE DEPARTMENT OF
HEALTH

ND - NOT DETECTED

J - ESTIMATED VALUE

NOTES

1. BASE MAP DAPTED FROM GALLAS SURVEYING GROUP "MONITORING WELL LOCATION PLAN" 2/24/2012.
2. PROPERTY KNOWN AND DESIGNATED AS LOTS 26, 27 & 28, BLOCK 67, SECTION 44 AS DESIGNATED ON THE OFFICIAL TAX MAP FOR THE TOWN OF HEMPSTEAD, NASSAU COUNTY, NEW YORK.



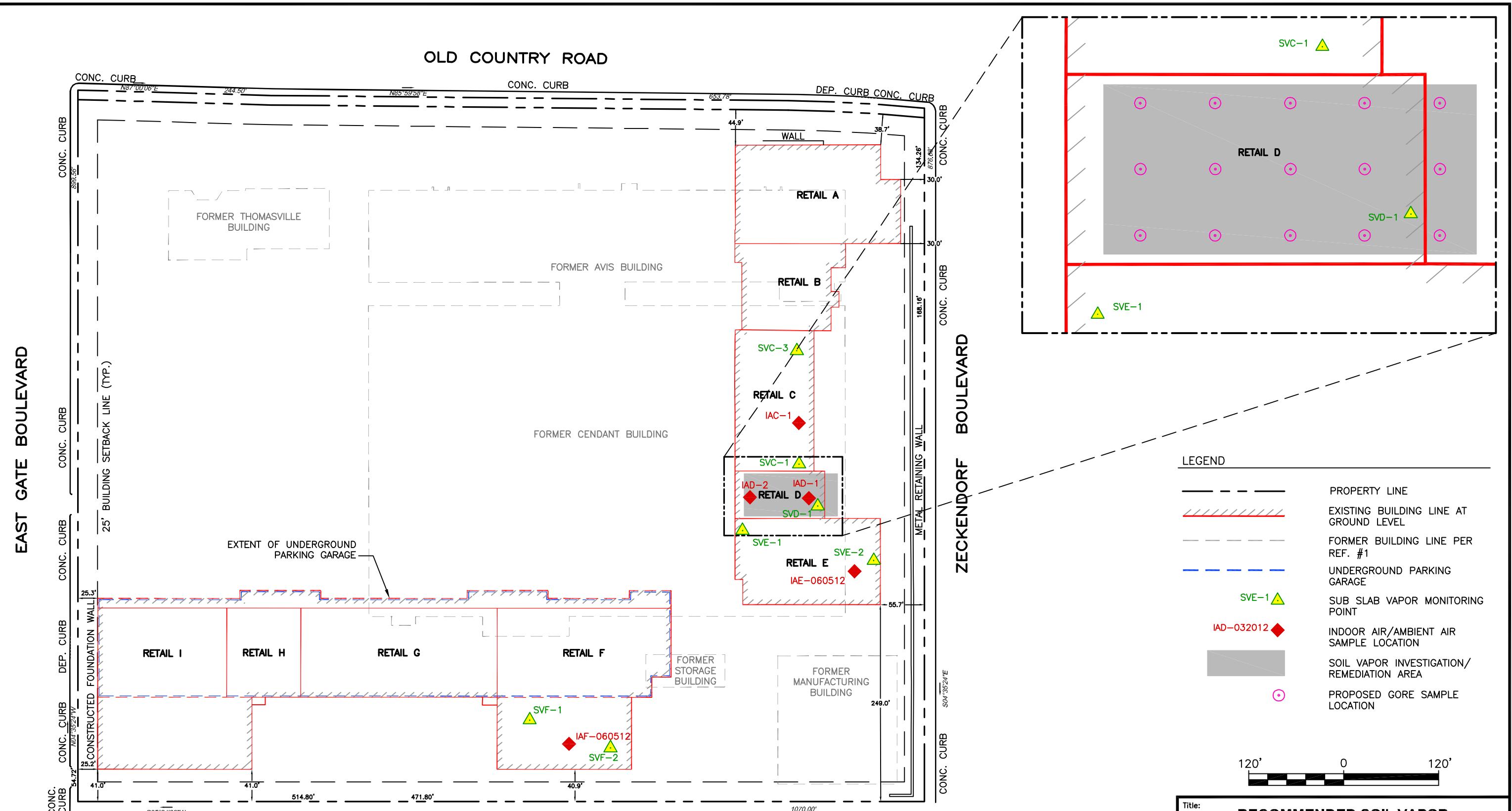
SOIL VAPOR MONITORING DATA MARCH - JANUARY 2013

FORMER AVIS HEADQUARTERS PROPERTY
900 OLD COUNTRY ROAD
GARDEN CITY, NEW YORK 11530

Prepared For

EQUITY ONE, INC.

ROUX ROUX ASSOCIATES, INC. Environmental Consulting & Management	Compiled by: W.M.	Date: 21FEB13	FIGURE 1
	Prepared by: J.A.D.	Scale: AS SHOWN	
	Project Mgr: C.W.	Project: 1924.0001Y	
	File: 1924.0001Y195.01.DWG		



NOTES

1. BASE MAP ADAPTED FROM GALLAS SURVEYING GROUP "MONITORING WELL LOCATION PLAN" 2/24/2012.
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RECOMMENDED SOIL VAPOR INVESTIGATION/REMEDIATION AREA

FORMER AVIS HEADQUARTERS PROPERTY
900 OLD COUNTRY ROAD
GARDEN CITY, NEW YORK 11530

Prepared For:

QUITY ONE, INC.

ROUX ROUX ASSOCIATES, INC. <i>Environmental Consulting & Management</i>	Compiled by: W.M. Date: Prepared by: B.H.C. Scale: Project Mgr: C.W. Project: File: 1924.0001Y195.01.DWG
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