

File No.: 04-1000-20-2017-293

August 17, 2017

s.22(1)

Dear s.22(1)

Re: Request for Access to Records under the Freedom of Information and Protection of Privacy Act (the "Act")

I am responding to your request of July 31, 2017 for:

Environmental Test Hole Investigation Reports submitted to the City's contaminated sites team relating to investigations conducted underlying Renfrew Street by Keystone Environmental in 2015 and 2016.

All responsive records are attached.

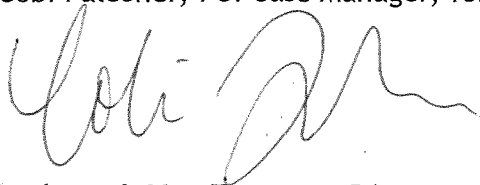
Under section 52 of the Act you may ask the Information & Privacy Commissioner to review any matter related to the City's response to your request. The Act allows you 30 business days from the date you receive this notice to request a review by writing to: Office of the Information & Privacy Commissioner, [info@oipc.bc.ca](mailto:info@oipc.bc.ca) or by phoning 250-387-5629.

If you request a review, please provide the Commissioner's office with: 1) the request number assigned to your request (#04-1000-20-2017-293); 2) a copy of this letter; 3) a copy of your original request for information sent to the City of Vancouver; and 4) detailed reasons or grounds on which you are seeking the review.

Please do not hesitate to contact the Freedom of Information Office at [foi@vancouver.ca](mailto:foi@vancouver.ca) if you have any questions.

Yours truly,

Cobi Falconer, FOI Case Manager, for

A handwritten signature in black ink, appearing to read 'Cobi Falconer', written over a light blue horizontal line.

**Barbara J. Van Fraassen, BA  
Director, Access to Information**

*Barbara.vanfraassen@vancouver.ca  
453 W. 12th Avenue Vancouver BC V5Y 1V4  
Phone: 604.873.7999  
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Encl.

:ma



July 25, 2017

Ms. Heidi Horlacher  
City of Vancouver  
Suite 320 – 507 West Broadway  
Vancouver BC V5Z 0B4

Dear Ms. Horlacher:

**Re: Environmental Summary Letter – City of Vancouver Investigations  
2889 East 1<sup>st</sup> Avenue and 1615 Renfrew Street, Vancouver, BC  
Project No. 12732**

As a requirement of the Test Hole Permitting process with the City of Vancouver (the City), this letter provides a summary of the environmental investigations completed to date on the City's roadway pertaining to the property located at 2889 East 1<sup>st</sup> Avenue and 1615 Renfrew Street, Vancouver, BC (the Site). The location of the Site is shown on the attached Figure 1.

## **BACKGROUND**

The Site is comprised of a rectangular-shaped lot located on the northwest corner of the intersection between Renfrew Street and East 1<sup>st</sup> Avenue, in the City of Vancouver, BC. The area of the Site is approximately 2,435 m<sup>2</sup>. The former on-Site buildings have been located at the Site since the late 1940s or earlier, and were removed in early 2016.

Various environmental investigations were conducted at the Site by D. Kelly Environmental Consulting Ltd. (D. Kelly) and JMB Environmental Ltd. (JMB) in 2013. In addition, a Notification of Likely or Actual Migration associated with the off-Site former service station (Super Save) located approximately 30 m east of the Site was provided by Marlin Ecological Consulting Ltd. (Marlin) in June 2015.

Keystone Environmental Ltd. (Keystone Environmental) completed a Supplemental Site Investigation (SSI) at the Site in 2015, and a Detailed Site Investigation (DSI) in 2016 (subsequent to demolition of the on-Site buildings) to further investigate the areas of potential environmental concern (APECs) identified by others and/or to delineate the extent of the identified contamination. The following areas of potential environmental concern (APECs) were identified:

- APEC 1: On-Site fill material.

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Engineering Solutions  
Assessment & Protection

- APEC 2A to APEC 2D: On-Site former heating oil underground storage tanks (UST).
- APEC 3: On-Site former dry cleaning operation located on the north portion of the Site
- APEC 4: On-Site former dry cleaning operation located on the central portion of the Site
- APEC 5: Off-Site former service station at 1616 Renfrew Street located to the east and up-gradient of the north portion of the Site.
- APEC 6: Off-Site former dry cleaning operations at 1654 Renfrew Street located to the east and up-gradient of the south portion of the Site.

## CITY OF VANCOUVER INVESTIGATIONS

From the SSI and DSI completed by Keystone Environmental, investigation locations were advanced on the City's roadway to investigate the following (Keystone Environmental's investigation locations advanced on the City's roadway are shown on the attached Figure 1).

- During the SSI, on-Site investigation location could not be advanced on the Site to investigate the off-Site dry cleaners APEC 6 (based on the presence of former on-Site buildings); therefore, investigation location MW/SV15-2 was advanced on the City's roadway in November 2015 as illustrated on Figure 1.
  - Monitoring well MW15-2 was advanced to approximately 7.6 mbg. The groundwater concentrations of volatile organic compounds (VOC) and volatile petroleum hydrocarbons (VPH) were less than the Contaminated Sites Regulation (CSR) drinking water use (DW) and aquatic life use (AW) standards.
  - The vapour well SV15-2 was advanced to approximately 1.5 mbg. The attenuated (predicted) vapour concentrations were less than the CSR commercial land use (CL) standards.
- To complete a remedial options evaluation of the hydrocarbon contamination migrating to the Site from the Super Save property (APEC 5), investigation locations MW16-11S/D and MW16-12S/D were advanced on the City's roadway in June 2016.
  - Monitoring wells MW16-11S/D (shallow and deep) were advanced to approximately 15 and 19.2 mbg, respectively. The groundwater concentrations of light extractable petroleum hydrocarbons (LEPHw), polycyclic aromatic hydrocarbons (PAH), VOC, VPHw and dissolved lead were less than the CSR DW and AW standards at MW16-11S/D.
  - Monitoring wells MW16-12S/D (shallow and deep) were advanced to approximately 6 and 9.1 mbg, respectively. The groundwater concentrations of light extractable petroleum hydrocarbons (LEPHw), polycyclic aromatic hydrocarbons (PAH), VOC, VPHw and dissolved lead were less than the CSR DW and AW standards at MW16-12S/D.
- During the DSI, groundwater dry cleaning solvents contamination (tetrachloroethene and trichloroethene concentrations greater than the CSR DW standards) was identified on the northeast portion of the Site at MW16-14 (approximately 9.1 mbg – top of screen). The dry cleaning solvents contamination was chemically and spatially (vertically) distinct and non-reactive with hydrocarbon contamination migrating to the Site (hydrocarbon

contamination was identified at depth of approximately 4.9 mbg). To horizontally delineate the extent of the dry cleaning solvents contamination, investigation locations MW16-25 and MW16-26 were advanced on the City's roadway in August 2016.

- Monitoring wells MW16-25 and MW16-26 were advanced to approximately 9.1 mbg. The groundwater concentrations of tetrachloroethene and trichloroethene were less than the CSR DW and AW standards at MW16-25 and MW16-26.
- It is noted that the groundwater concentrations greater than the CSR AW and/or DW standards were identified at MW16-25 and MW16-26 (1,2-Dibromoethane (0.59 µg/L), dichloromethane (65 µg/L), benzene (1,100 µg/L), toluene (4,800 µg/L), ethylbenzene (800 µg/L), xylenes (5,600 µg/L) and VPHw (2,800 µg/L)). These constituent's exceedances are associated with the off-Site service station located at 1616 Renfrew Street and not associated with the Site's operations.
- Based on the findings of the investigations and delineation, a *Notification of Likely or Actual Migration* was submitted to the Ministry of Environment (MOE) and the City in October 2016.
- To remediate the dry cleaning solvents contamination migrating off-Site, location MW17-34S/D was advanced for chemical injection remediation of the groundwater dry cleaning solvents contamination in January 2017. Monitoring wells MW17-34S/D (shallow and deep) were advanced to approximately 9.1 mbg and 12.8 mbg, respectively.

## SUMMARY

As indicated in the *Notification of Likely or Actual Migration* submitted to the City in October 2017 by Keystone Environmental (on behalf of Renfrew View Homes Development Ltd.), dry cleaning solvents groundwater contamination is present on the City's roadway at approximately 9.1 mbg on Renfrew Street. The dry cleaning solvents groundwater contamination will be remediated with chemical injection by October 2017.

Subsequently, applications to the MOE for Ministry Instruments for the Site and affected parcel (the City's roadway – dry cleaning solvents groundwater contamination) will be prepared. The anticipated date for the submission is October 30, 2017.

Lastly, in accordance with the requirements of the Administrative Guidance 11 *Expectations and Requirements for Contaminant Migration* (AG11), Keystone Environmental will be submitting an additional letter summarizing the investigations and remediation completed for the dry cleaning solvents contamination migrating to the City's roadway by October 2017. The objective of the letter will be to meet the MOE's communication requirements and expectations for persons responsible for parcels that are the source of migration of contaminants.

## LIMITATIONS

Findings presented in this letter are based upon (i) a limited visual review of accessible areas on-Site, (ii) a review of available previous reports, and (iii), the results of field investigations including boreholes, monitoring wells, soil vapour wells, and soil, groundwater, and soil vapour sample analyses. Analytical results reflect conditions encountered at specific test locations

which are limited to the scope of this project. Site conditions (geologic, hydrogeologic and chemical characterization) may vary from that extrapolated from the data collected during this investigation. Consequently, while the evaluations and conclusions documented in this report have been prepared in a manner consistent with that level of care and skill normally exercised by other members of the environmental science and engineering profession practicing under similar circumstances in the area at the time of the performance of the work, this report is not intended nor is it able to provide a totally comprehensive review of past or present site environmental conditions.

This letter has been prepared solely for the internal use of City of Vancouver pursuant to the agreement between Keystone Environmental Ltd. and Renfrew View Homes Ltd. By using this letter, City of Vancouver agrees that they will review and use the letter in its entirety. Any use which other parties make of this letter, or any reliance on or decisions made based on it, are the responsibility of such parties. Keystone Environmental Ltd. accepts no responsibility for damages, if any, suffered by other parties as a result of decisions made or actions based on this letter.

We trust this is the information you require at this time. Please contact us if you have any questions.

Sincerely,

**Keystone Environmental Ltd.**

Sumeet Dogra, P.Eng.  
Project Manager

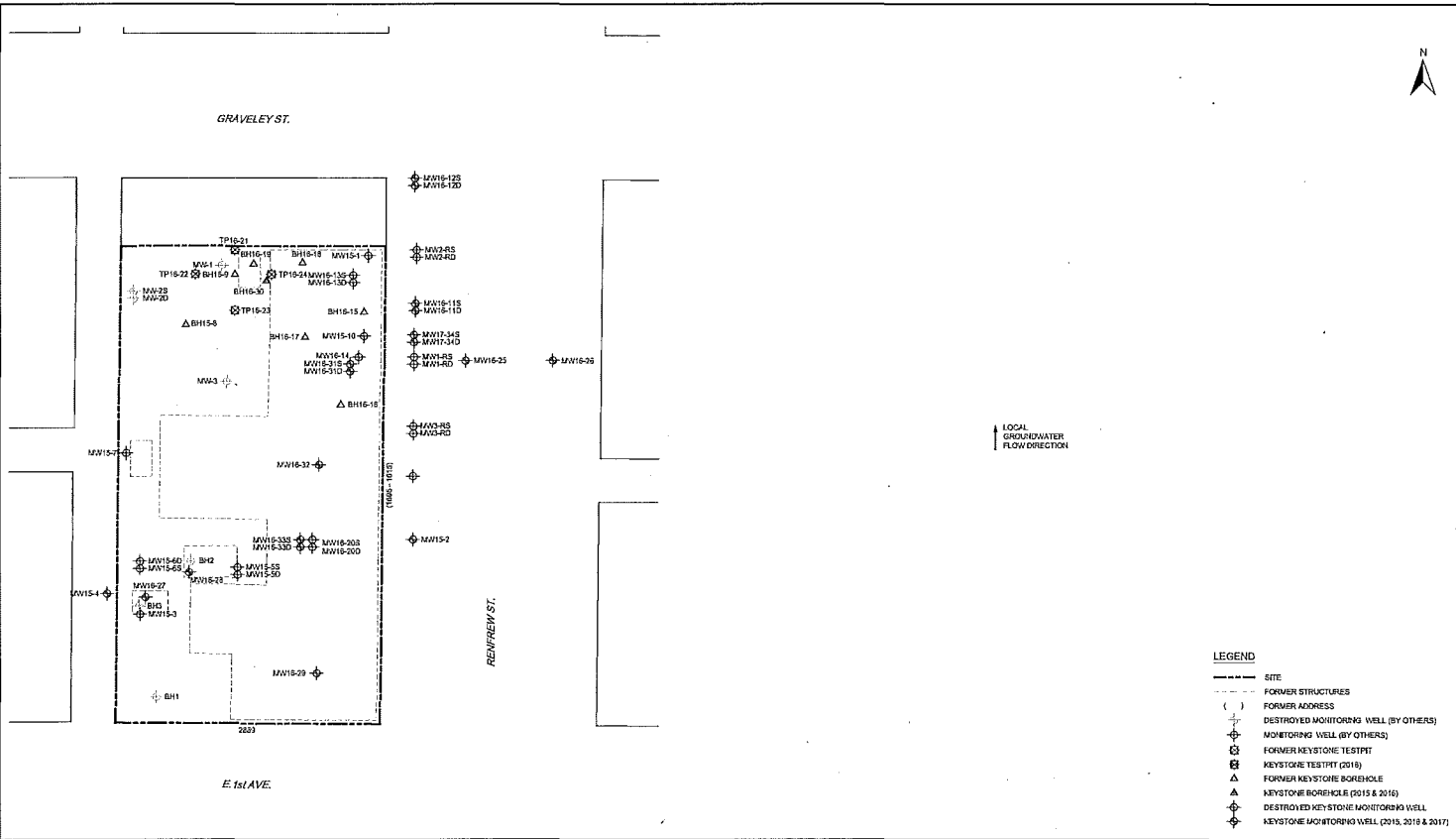
Raminder Grewal, P.Eng.  
President

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**ATTACHMENT:**

- Figure

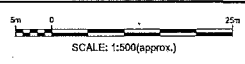
**FIGURE**



- LEGEND**
- SITE
  - - - - - FORMER STRUCTURES
  - ( ) FORMER ADDRESS
  - ⊕ DESTROYED MONITORING WELL (BY OTHERS)
  - ⊕ MONITORING WELL (BY OTHERS)
  - ⊕ FORMER KEYSTONE TESTPIT
  - ⊕ KEYSTONE TESTPIT (2018)
  - △ FORMER KEYSTONE BOREHOLE
  - △ KEYSTONE BOREHOLE (2015 & 2016)
  - ⊕ DESTROYED KEYSTONE MONITORING WELL
  - ⊕ KEYSTONE MONITORING WELL (2015, 2016 & 2017)



NOTES:  
1. THIS DRAWING IS FOR GENERAL INFORMATION ONLY.  
LOT BOUNDARIES AND FEATURES ARE APPROXIMATE



2689 E. 1st Avenue  
Vancouver, B.C.  
Renfrew View Homes Ltd.  
REVISION No. 00 DATE June 2017 PROJECT No. 12732-04A

**Figure 1**  
Sample Location Plan