

17 February 2012

File: 147-111388

Mr. Robert Filkins

Senior Engineering Geologist, Remedial Bureau B  
Division of Environmental Remediation, NYSDEC  
625 Broadway, 12<sup>th</sup> Floor  
Albany NY 12233-7016

**Re: Former Mimi Cleaners: 58 Christie Place, Scarsdale, NY  
VP Site No. V00306-3  
Scope to Conduct an ISCO Treatment Pilot Test  
Christie Place Building**

Dear Mr. Filkins:

HDR provides this scope of work to conduct a pilot test for an In-Situ Chemical Oxidation (ISCO) treatment under the slab of the Christie Place Building (CPB). Based on the results of the sub-slab vapor assessment study conducted in 2011 at the CPB, elevated concentrations of perchloroethylene (PCE) and related chlorinated volatile organic compounds (CVOCs) were detected in the sub-slab vapors at several locations including the footprint area of the former Mimi Cleaners (Site) and an additional location further to the west. Figure 1 shows an aerial photograph with the CPB highlighted and the Site within the building highlighted.

Figure 2 provides the sample results of the recent sub-slab vapor and indoor air samples collected in the CPB in 2011 as part of the sub-slab vapor assessment study conducted for the buildings between Spencer Place and Christie Place. The details of the sub-slab assessment study are included in a summary report submitted to New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) on 10 February 2012.

HDR has concluded that the probable source of the sub-slab CVOC vapor concentrations detected in the samples is PCE in the soil above the bedrock or possibly in the fractures of the shallow bedrock above the groundwater. As shown in Figure 3, the results of the groundwater sampling from the monitoring wells in the area of the Site indicate the CVOC concentrations in the groundwater in this area are decreasing over time. Groundwater in this area flows in a general south-southwest direction. Also, it does not appear that the concentrations of PCE in the groundwater would generate the concentrations of PCE detected in the sub-slab vapors.

In an effort to determine the effectiveness of an ISCO treatment of the PCE present under the slab and above the groundwater, HDR is proposing to conduct a pilot test ISCO treatment at this location. A chemical mix of sodium persulfate activated with hydrogen peroxide will be used to treat the PCE present in the soils and/or shallow bedrock under the slab and above the groundwater. The chemical

mix, designed to oxidize and breakdown the PCE, will be delivered in two locations under the building slab. One location will be in the area of the former Mimi Cleaners footprint. HDR will use the existing SVE piping that is in this area and is currently being used as part of the Sub-Slab Depressurization System (SSDS) to provide negative pressure under the slab in this portion of the building. The SSDS will be turned off during the treatment process. One or two of the SVE legs will be modified and used to deliver the chemical mixture under the slab in this portion of the building. Figure 4 shows the current layout of the SSDS including the SVE piping in the area of the Site. In addition, an injection port will be installed in the western portion of the building in the area of CPB-SS-03 (shown on Figure 2) where elevated concentrations of PCE were detected in the sub-slab vapors. The injection port will be installed such that the chemical mix will be delivered near the interface of the soil and the bedrock.

The sodium persulfate will be mixed as a 20% solution and the hydrogen peroxide will be mixed as a 12% solution. It is anticipated that a total of approximately 750 gallons of sodium persulfate and 150 gallons of hydrogen peroxide will be delivered as part of the treatment.

As mentioned previously, the SSDS at this location will be shut down during the injection process to facilitate the treatment and avoid possible damage to the SSDS blower. It is estimated the SSDS will be shut down for a total of one week during the treatment process. The SSDS will be turned back on after the treatment process is completed. Approximately one month after the ISCO treatment is completed, HDR will shut the SSDS down in the CPB for approximately one week and collect sub-slab vapor samples from the CPB-SS-02 and CPB-SS-03 sample locations (see Figure 2) to determine the effectiveness of the ISCO treatment. The SSDS will be turned back on immediately after the sampling is completed.

#### Schedule

HDR is prepared to commence with ISCO treatment in the CPB once approval of this scope has been received and the required equipment and chemicals are available.

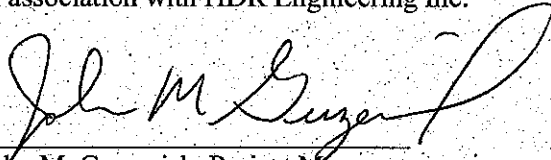
Currently, the tenant space at the northeast corner area of the building (referred to as the Christie Place Bakery on Figure 2) is unoccupied. To facilitate the ISCO treatment, HDR is planning use this location as a staging area to mix the chemicals. It is anticipated that this space will be occupied by another tenant after March such that the logistics of the treatment will be more difficult when this space is occupied. We would like to move forward with the ISCO treatment as soon as possible to take advantage of this unoccupied space. In order to minimize the disturbance to the tenants in the building, the ISCO treatment will be conducted during off hours when the tenants are closed for business.

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If you have any questions, please feel free to contact me at (845) 735-8300.

Very truly yours,

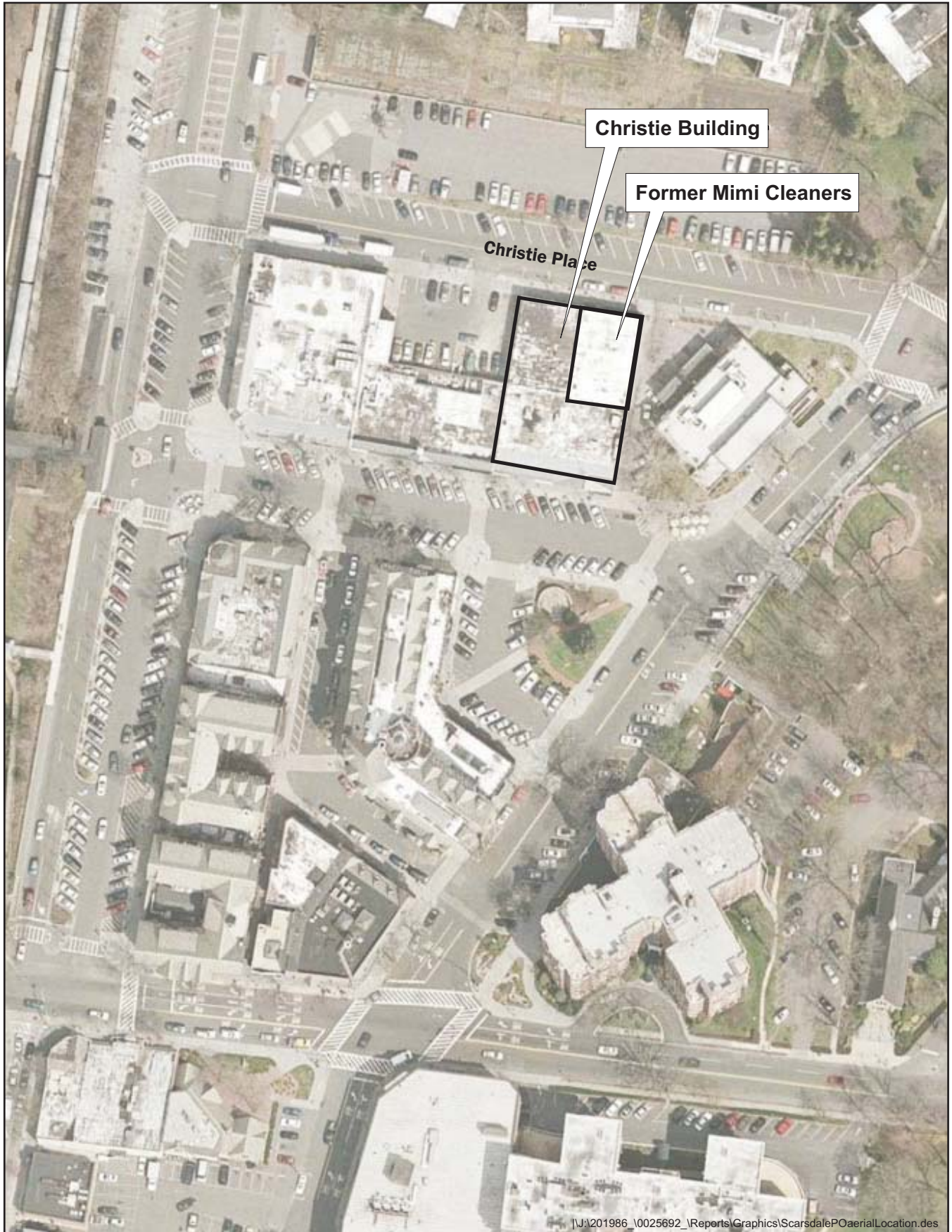
Henningson, Durham & Richardson Architecture and Engineering, P.C.  
in association with HDR Engineering Inc.

A handwritten signature in black ink, appearing to read "John M. Guzewich". The signature is fluid and cursive, with a large, stylized "J" and "G".

John M. Guzewich, Project Manager  
Environmental Restoration Group

**Attachments**

Cc: N. Walz, NYSDOH  
B Groden, West-Ex Associates  
C. Leas, Esq. Sive, Paget & Riesel, P.C.



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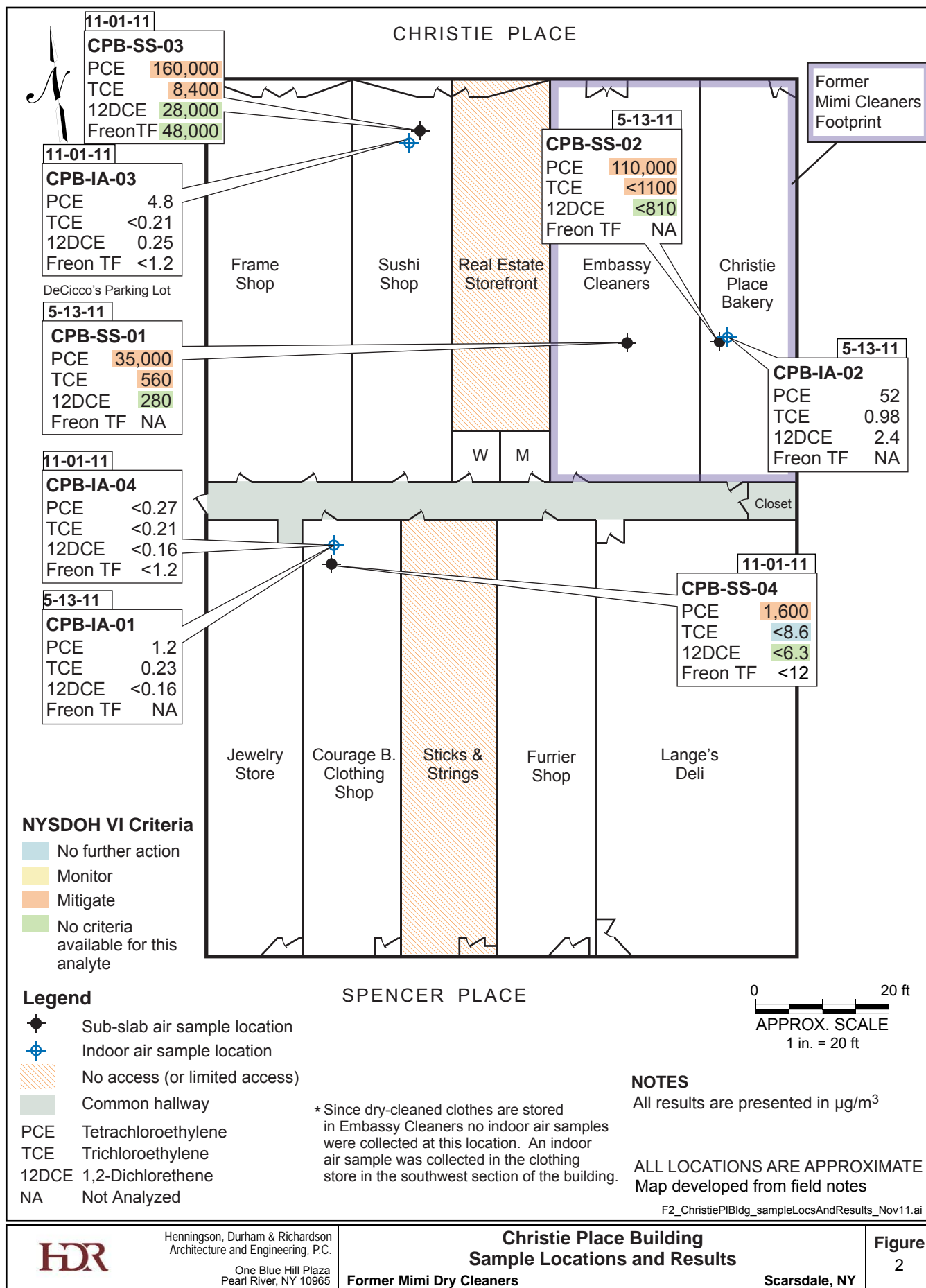
## Location of Christie Building

Former Mimi Dry Cleaners

Scarsdale, NY

Figure  
1



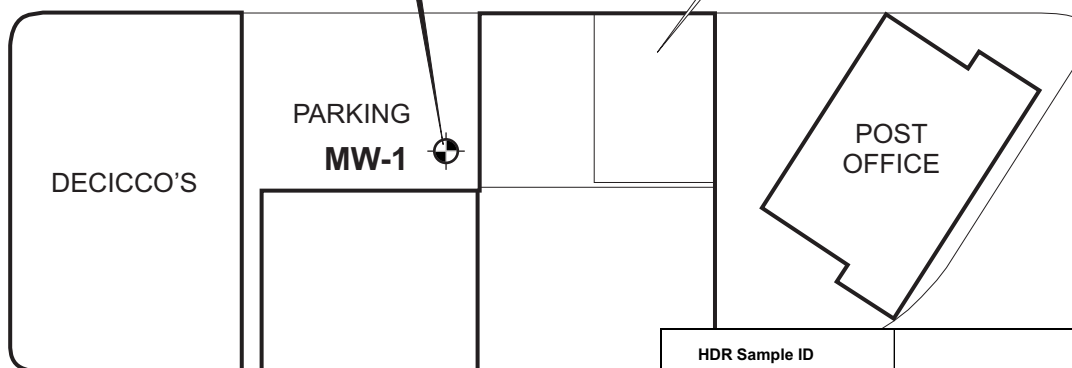


HDR Sample ID	MW-1						NYSDEC
Date Sampled	5/30/03	9/17/03	7/11/06	6/21/07	4/7/08	6/23/11	Standards (a)
<b>VOCs (ug/L)</b>							
Acetone	NR	2.0 j	ND	ND	ND	ND	50
Total 1,2-Dichloroethene <sup>1</sup>	<b>6.6</b>	<b>13</b>	<b>19 j</b>	<b>17</b>	2.1	ND	5
Chloroform	0.52 j	ND	ND	ND	ND	ND	7
Trichloroethene	<b>12</b>	<b>42</b>	<b>27 j</b>	<b>20</b>	2.2	ND	5
Tetrachloroethene	<b>180 d</b>	<b>1300 d</b>	<b>1000 d</b>	<b>480</b>	<b>25</b>	<b>14</b>	5

CONDOMINIUMS

FORMER  
MIMI DRY CLEANERS

CHRISTIE PLACE



## Legend



Monitoring well location, former Mimi Cleaners

**NOTE:** Locations are approximate

SPENCER PLACE

(a) - Division of Water Technical and Operational Guidance Series (1.1.1), June 1998.

d - Indicates all compounds identified in an analysis at a secondary dilution factor.

j - Indicates an estimated value. This compound meets the identification criteria, but the result is less than the specified detection limit.

NR - Not analyzed

Note - Numbers in **bold** exceed the Class GA Standard.

Map source: Developed from field sketch and notes.

HDR Sample ID	MW-2						NYSDEC
Date Sampled	5/30/03	9/17/03	7/11/06	6/21/07	4/7/08	6/23/11	Standards (a)
<b>VOCs (ug/L)</b>							
Acetone	ND	6.0 j	ND	ND	ND	ND	50
Total 1,2-Dichloroethene <sup>1</sup>	2.0	2.0 j	ND	<b>7.5</b>	2.2	ND	5
Chloroform	1.1	1.0 j	1.4	ND	ND	ND	7
Trichloroethene	3.1	3.0 j	3.0 j	3.1 j	<b>6.4</b>	1.7	5
Tetrachloroethene	<b>50</b>	<b>53</b>	<b>54</b>	<b>48</b>	<b>37</b>	<b>11</b>	5

0 80 ft

APPROX. SCALE  
1 in. = 80 ft

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## Groundwater Monitoring Well Locations and Sampling Results 2003 through 2011

Former Mimi Dry Cleaners

Scarsdale, NY

Figure  
3

