Revised Pilot Test Work Plan
Elks Plaza, LLC
157-189 West Merrick Road
Freeport, NY
NYSDEC Site No.: 130193

April 2011

Prepared for:

Elks Plaza, LLC
c/o Galaxy Management, Inc.
28 Campbell Drive
Dix Hills, NY 11746-7902

Prepared by:

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April 6, 2011

NYSDEC
Division of Hazardous Waste Remediation
625 Broadway
Albany, New York 12233-7015

Attention: Melissa Sweet, Project Manager

Re: **Revised Pilot Test Work Plan**
Elks Plaza, LLC
157-189 West Merrick Road
Freeport, NY
NYSDEC Site No.: 130193

Dear Ms. Sweet:

CA RICH Consultants, Inc. (CA RICH) is pleased to present this Revised Pilot Test Work Plan for Elks Plaza, LLC at 157-189 West Merrick Road Freeport, NY.

Introduction

The property has been the subject of a series of investigations that have included testing and analysis of the groundwater, soil, soil vapor and indoor air at the property. The results of these investigations are summarized in the following documents.

- Site Characterization Report, Elks Plaza LLC March 2010
- Supplemental Soil Vapor Investigation, Elks Plaza LLC June 2010

Based on the results of those investigations elevated levels of perchloroethene (PCE) were identified below the units 179A and 181. Unit 181 was the former location of a dry cleaning tenant. The focus of this work plan will be to perform a pilot test within units 179A, 181 and 181A, the space currently occupied by a Laundromat. An initial test boring will be performed to delineate the vertical extent of PCE below a former dry cleaning machine that existed in unit 181. The results of the test boring and the pilot test will, in turn, be used to select a fan and design a venting system to address the sub-slab soil vapor issues identified in the earlier investigations.

Scope of Work

The following scope of work will be performed.

Test Boring

1) A soil boring will be installed in the area of the former dry cleaning machine using a Geoprobe sampling device. This area is identified as boring SB-4 in the March 2010 Site Characterization Report. Soil samples will be collected continuously from the ground surface to the water table, which is anticipated to occur at a depth of 14 feet. The cores from 0 to 5 feet, 5 to 10 feet and 10

feet to the water table will be examined and screened with a Photo-Ionization Detector (PID). The portions of each core displaying the highest PID readings will be placed in laboratory issued bottles and submitted for the analysis of Volatile Organic Compounds (VOCs). The results of these analyses, which will be provided to the NYSDEC in a progress letter, will be compared to the 6NYCRR Part 375 Protection of Groundwater standards (Ref. 4) and will determine the length of the screens for the venting system. If the results exceed the Part 375 standards, Soil Vapor Extraction (SVE) vents will be installed with screened sections intersecting the depths of the detections that exceed the standard. If the results do not exceed the Part 375 standards, shallow Sub-Slab Depressurization (SSD) vents will be installed to a depth of approximately one foot below the current slab.

A work zone will be delineated using yellow caution tape. A field Photo-Ionization Detector (PID) will be used to monitor VOC levels at the perimeter of the work zone. If the PID readings exceed 5 ppm at the perimeter of the work zone, the work will stop. A shop vac will be set up outside with an extension hose. The hose will be placed at the work zone to capture the PCE vapors and vent them outdoor until the boring is completed. The surplus soils uncovered during this operation will be placed in a DOT-approved drum for proper off-site disposal.

Pilot Test

1) We will begin by installing four soil vapor vents in the floor of the Laundromat. The locations of these vents are shown on Figure 1. We anticipate that the four vents installed for the purposes of the pilot test will be utilized in the final design of the venting system. The depth of the vents will be determined based on the results of the test boring described above. A temporary cover will be placed over the vents after they are installed.

A work zone will be delineated using yellow caution tape. A field PID will be used to monitor VOC levels at the perimeter of the work zone. If the PID readings exceed 5 ppm at the perimeter of the work zone, the work will stop. A shop vac will be set up outside with an extension hose. The hose will be placed at the work zone to capture the PCE vapors and vent them outdoor until the installation is completed. The surplus soils uncovered during this operation will be placed in a DOT-approved drum for proper off-site disposal.

2) After the installation of the vents is completed, we will mobilize a field crew and equipment to the site to perform the pilot test. The weather conditions will be noted and a work zone will be delineated using yellow caution tape. A portable regenerative blower with a variable frequency drive will be used for this test. The variable frequency drive will allow us to speed up or slow down the rotation of the blower so that we can adjust the discharge rate. A section of flexible hose and an in-line flow meter will be placed on the suction side of the blower. The other end of the hose will be placed on the vent to be tested. Caps equipped with a barbed fitting suitable for the collection of vacuum readings will be placed on the other three vents so that readings can be recorded. Another section of hose will be placed on the pressure side of the blower. This will be connected to a portable carbon drum which will then discharge to the atmosphere.

3) Once the equipment is connected, the blower will be started and the flow rate extracted from the test vent will be recorded. Measurement of the vacuum at the suction side of the blower will be recorded using an analog magnehilic-type vacuum gauge. The vacuum at the other three vents will be measured using an Infiltec model DM1 Digital Micro-Manometer that is capable of measuring vacuum to 0.001 inches of water. The test will consist of several steps with increasing rates of flow. Each step will run for approximately 15 to 20 minutes to allow the vacuum readings at each point to equilibrate.

At least three temporary vacuum monitoring points will be installed at the locations identified on Figure 1 by drilling ½ - inch diameter holes into the floor. In the event a vacuum measurement is not detected in the test vents which are not connected to the blower, additional holes will be

drilled into the floor closer to the vent being tested. Temporary vacuum monitoring points will be set into these holes so that vacuum readings can be collected using the digital manometer.

4) Measurements of total VOCs will be collected at the beginning and end of each step of the test using a field PID connected to a sample port on the blower. One laboratory sample will be collected using a SUMMA canister five minutes after beginning the first step of test. The flow rate and vacuum at the test vent will be recorded when the sample is collected.

5) A second pilot test will be run on the test vent installed at the opposing corner of the site as shown on Figure 1. The procedures for the second test will be the same as the first except that a SUMMA canister will not be collected.

Report Preparation

Once the test boring and pilot test are completed, a pilot test report will be prepared and submitted to the NYSDEC. The pilot test report will include a description of the work performed. Maps and tables of the vacuum readings recorded during the test will be prepared. A summary of the extraction flow rates applied during the test and the laboratory results of the soil vapor sample will also be included in the report. This information will be used to calculate the contaminant mass per unit of time (mass/time) emitted from the vent during the test.

Based on the readings recorded during the test, the flow and vacuum requirements necessary to develop negative pressure below the existing slab will be determined. Recommendations for a commercially available fan (or fans) that meet these requirements will be presented. The results of the contaminant mass per unit time calculations will be compared to the Division of Air Resources -1 (DAR-1) Guidelines (Ref. 3). This evaluation will be used to determine if off-gas treatment of the extracted vapors will be required.

Once the pilot test report has reviewed by the NYSDEC, a more extensive Interim Remedial Measures (IRM) Work Plan will be prepared. The IRM Work Plan will include a drawing outlining the recommended layout of the vents, piping, fan(s) and associated equipment that will be included in the final venting system. Procedures for the operations and maintenance of the venting equipment will be included in the plan. It will also include a monitoring program for both soil vapor and groundwater monitoring that will be employed after the system has been installed and placed into operation.

References

1. Preferred Environmental Services (October 2009), Site Characterization Report, Elks Plaza LLC - Site # 130193, 157 -189 West Merrick Road, Freeport, NY.

2. Preferred Environmental Services (June 2010), Supplemental Soil Vapor Investigation, Elks Plaza LLC - Site # 130193, 157 -189 West Merrick Road, Freeport, NY.

3. NYSDEC, 6NYCRR Part 212, General Process Emission Sources.

4. NYSDEC, 6NYCRR Part 375, Environmental Remediation Programs.

If you have any questions regarding this plan, please do not hesitate to call our office.

Respectfully,

CA RICH CONSULTANTS, INC.

Eric A. Weinstock
Vice President

Attachments

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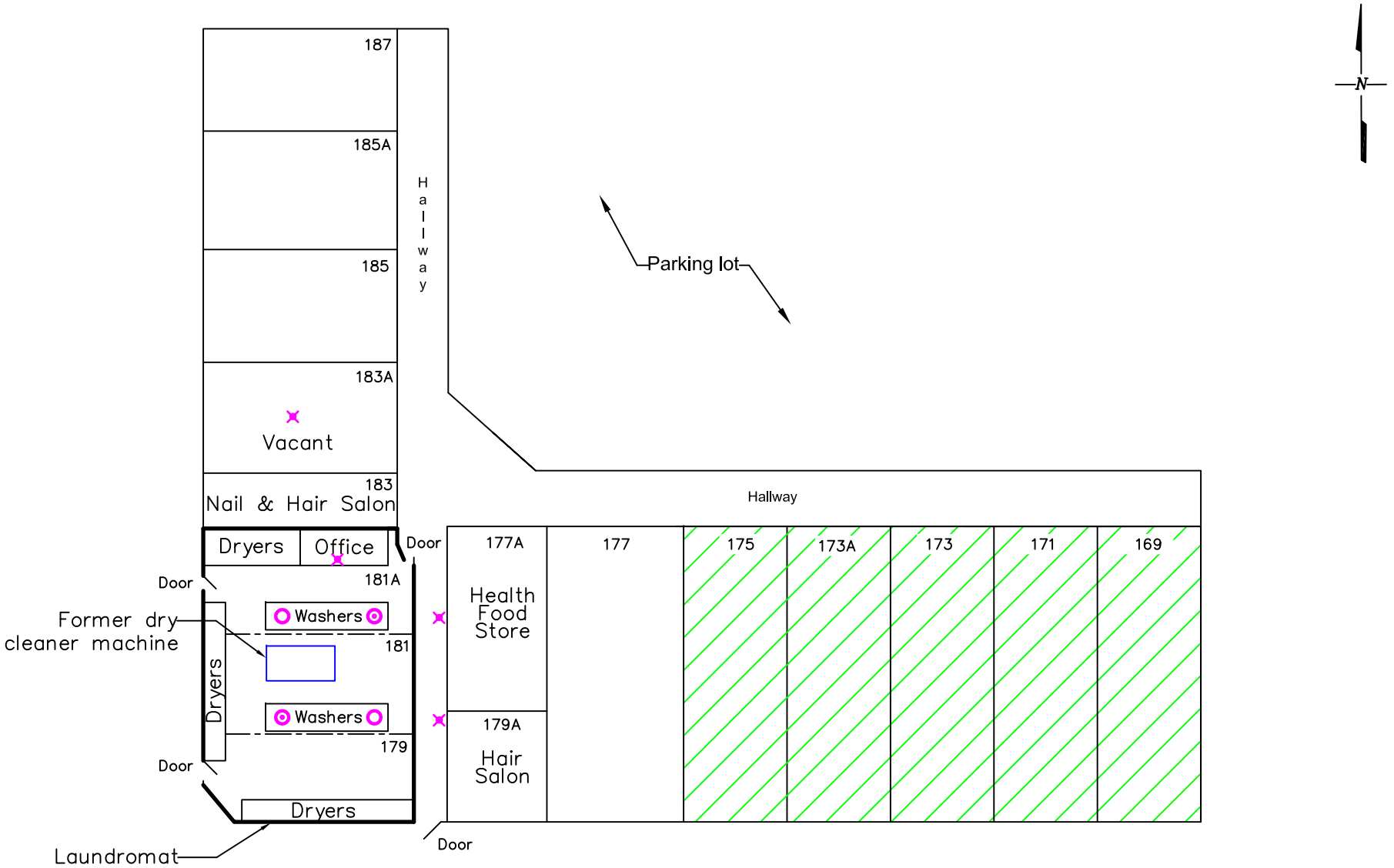
FIGURES



LEGEND

- Proposed vent
- Vent to be pilot tested
- Temporary vacuum point

Units have basement, basement unit is # 165

0 20 40 60

Graphic Scale in Feet

CA RICH CONSULTANTS, INC.

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17 Dupont Street, Plainview, New York 11803

TITLE: Layout of Proposed Pilot Test		DATE: 3/28/2011
		SCALE: 1"=40'
FIGURE: 1	Elks Plaza, LLC 157–189 W. Merrick Road Freeport, New York	DRAWN BY: J.T.C.
DRAWING NO: 2011–M3		APPR. BY: E.A.W.