



March 11, 2010

Mr. Jeff Ackerman, P.G.  
Remediation and Redevelopment  
State of Wisconsin Department of Natural Resources  
South Central Regional Headquarters  
3911 Fish Hatchery Road  
Fitchburg, WI 53711-5397

**Re: Sub-Slab Depressurization System Installation  
Post Mitigation Report  
Former Robinson's Cleaners  
1819 Milwaukee Street, Janesville, WI  
WI BRRTS#02-54-248342  
EnviroForensics Project 6156**

Dear Mr. Ackerman:

On behalf of Mr. Ray Gehrig and Ms. Marcia O'Loughlin of the former Robinson's Cleaners, Environmental Forensic Investigations, Inc. (EnviroForensics) is pleased to provide the results of the completed installation of the Sub-Slab Depressurization System (SSDS) at the Former Robinson's Cleaners facility located at 1819 Milwaukee Street in Janesville, Wisconsin (Site) in accordance with the approved work plan dated November 2, 2009. Pursuant to your letter dated October 22, 2009, the depressurization system was installed to immediately reduce and maintain PCE and TCE concentration within the tenant space to acceptable levels.

## **1.0 Objective**

Acura Services working successfully under the direction of EnviroForensics completed installation of a sub slab mitigation system at Vogues Cleaners (former Robinson's Cleaners) in Janesville, Wisconsin on December 28, 2009. The Sub-Slab Depressurization System was installed to reduce the potential for contaminated soil beneath the building into the occupied space (Checks for Cash).

## **2.0 SCOPE OF SERVICES**

### **2.1 Negative Pressure Testing**

Before the installation of the SSDS a Negative Pressure Test (NPT) was conducted. On December 21, 2009 Acura Services performed the NPT test by drilling a vacuum test hole in the concrete slab and several monitoring holes at different distances. A negative pressure of approximately 0.018 inches of water (in H<sub>2</sub>O) was applied to the test hole while negative pressure was read at the monitoring probe locations. Based upon the readings, it was determined that the installation of three (3) depressurization sumps would adequately induce a negative pressure beneath the approximately 4,000 square foot (sq ft) concrete slab.

### **2.2 SSDS Installation**

After the preliminary testing had been completed, the installation of the mitigation system was initiated, December 23, 2009. Acura mobilized to the Site and advanced three (3) core-holes into the concrete floor at the locations identified on Figure 1. Once the subslab material was encountered, a portion of the materials were removed with an industrial strength vacuum to create a void. The subslab materials encountered consisted of a highly permeable mixture of sand, pebbles, and cobbles. These subslab conditions promote a high radius of influence for each sump.

Vent piping was inserted into each sump and extended vertically to a four (4) inch diameter common header. A schematic of the SSDS layout is provided in Figure 1. The pipe was sealed into each sump with an expandable epoxy-resin material. An inline centrifugal fan was installed in the exterior vent pipe approximately 12 feet above ground surface, and was wired to an internal switch to provide immediate power shut-off or maintenance. The fan has the capacity to move 70 cubic feet per minute (cfm) at 2 in H<sub>2</sub>O and 210 cfm at 1 inch H<sub>2</sub>O. A differential pressure manometer was installed on the primary suction pipe to monitor the system pressure during operation. A diagram of the SSDS typical sump construction is provided as Figure 2.

### 2.3 Performance Testing

To verify that the system was operating effectively, a performance test was conducted and pressure readings were collected from the two most distal monitoring points. Negative pressure readings of 0.042 in H<sub>2</sub>O and 0.104 in H<sub>2</sub>O were measured at approximately 30 feet and 20 feet from the nearest SSDS sump. This indicated that the SSDS was operating effectively and was imparting a negative pressure beneath the concrete slab.

### 3.0 SUMMARY AND RECOMMENDATIONS

The Sub-Slab Depressurization System has been continuously operating since December 29, 2009. Based on the measured depressurization following start up of the sealed system, it appears that the vapors under the slab are effectively being rerouted through the mitigation system for safe discharge outside of the building. EnviroForensics recommends that a follow-up indoor air monitoring event be performed to evaluate the impact of the SSDS on indoor air quality.

We trust this submittal is responsive to your needs. If you have any questions or require additional information, please feel free to contact me at 317-972-7870 or by email at [jcarnahan@enviroforensics.com](mailto:jcarnahan@enviroforensics.com).

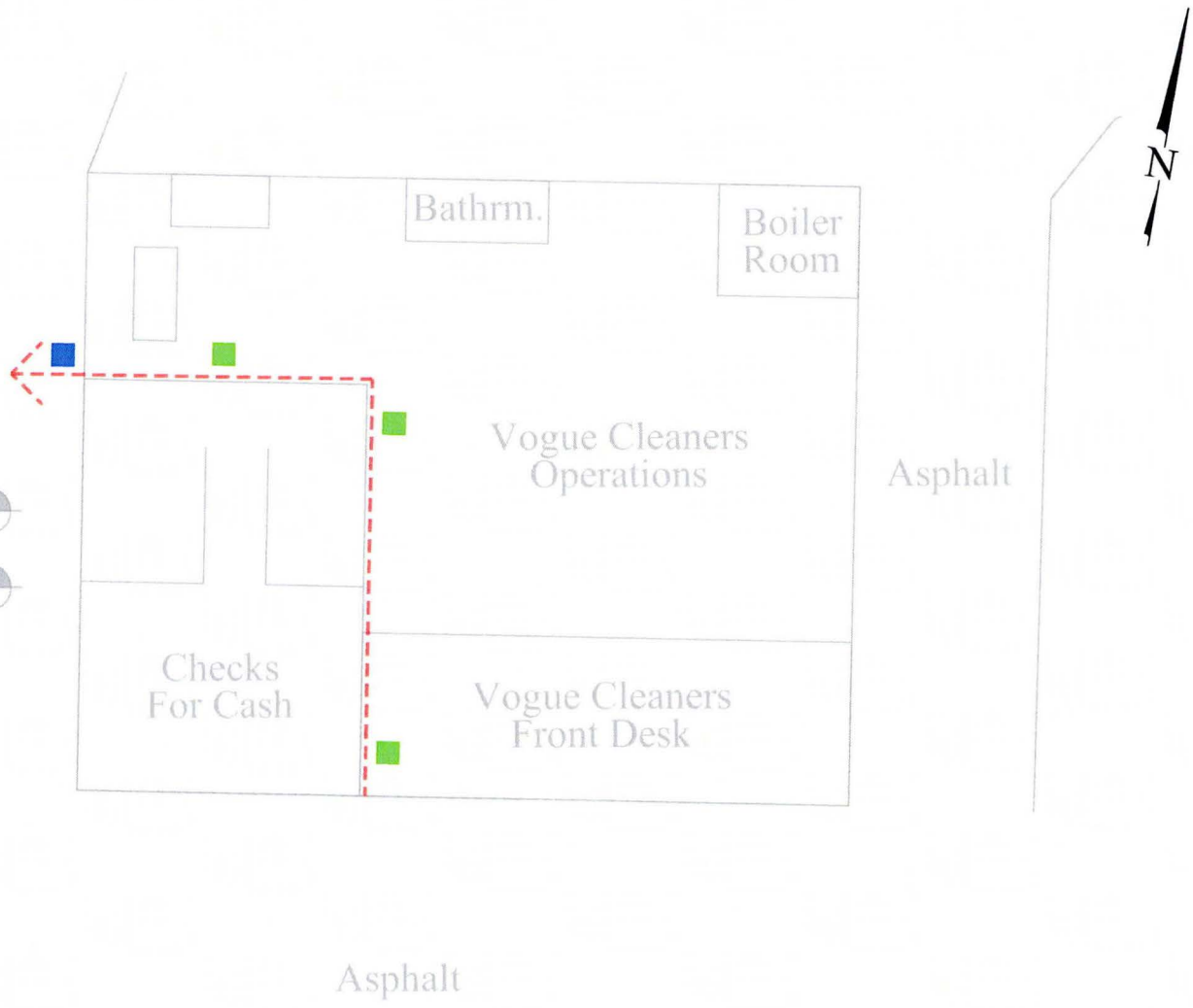
Sincerely,

A handwritten signature in black ink that reads "Jeff Carnahan".

Jeff Carnahan, LPG  
Senior Project Manager

**FIGURES**


2S  
 1D  
 Brass

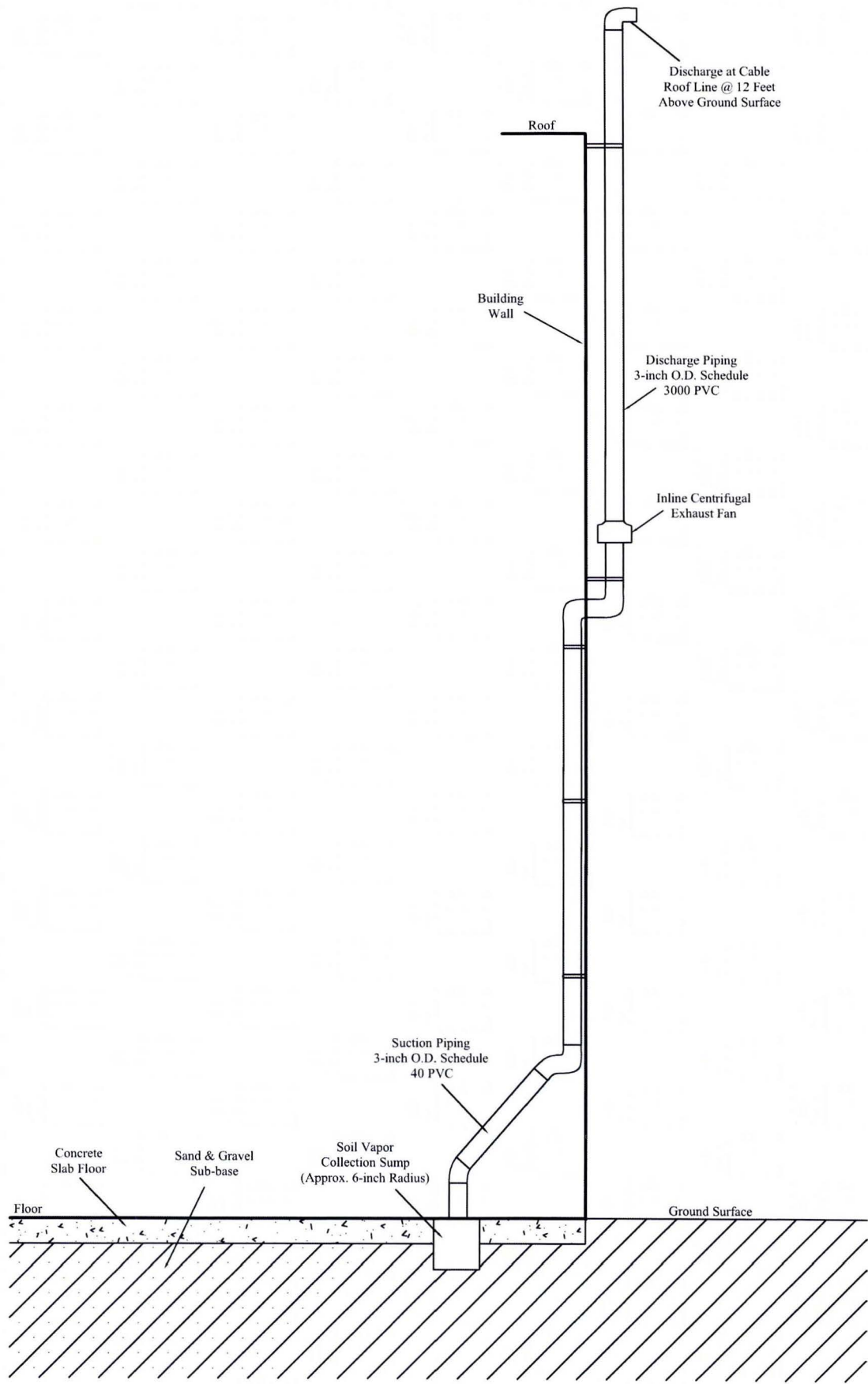


**Legend:**

- - - 4" Continuous Header
- 2" Depressurization Sump
- Fan Exhaust

Not to Scale

No.	Date	Revision	Approved	 ENVIRONMENTAL FORENSIC INVESTIGATIONS, INC. 602 N. Capitol Ave., Suite 210 • Indianapolis, IN 46204 EnviroForensics.com	Date:	2/1/10	<b>PROFILE SCHEMATIC OF SUB-SLAB DEPRESSURIZATION SYSTEM</b>  Robinson Cleaners 1819 Milwaukee Street Janesville, Wisconsin	Figure
					Designed:	GZ		1
					Drawn:	HR		Project
					Checked:	GZ		6156
					DWG file:	57772-10		



Not to Scale

No.	Date	Revision	Approved

**ENVIROforensics**  
 ENVIRONMENTAL FORENSIC INVESTIGATIONS, INC.  
 602 N. Capitol Ave., Suite 210 • Indianapolis, IN 46204  
 EnviroForensics.com

Date:	2/1/10
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Checked:	GZ
DWG file:	57702-10

**PROFILE SCHEMATIC OF TYPICAL 6" SUB-SLAB DEPRESSURIZATION**  
 Robinson Cleaners  
 1819 Milwaukee Street  
 Janesville, Wisconsin

Figure	2
Project	6156