Alpine Environmental Services, Inc.

Report of Sub-Slab Depressurization
Vapor Mitigation System Installation
Villa Dry Cleaners Site, 1885, 1889-1899 Deer Park Avenue,
Town of Babylon, Suffolk County, New York
August 10, 2011

Alpine Environmental Services, Inc.

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1 Introduction

The Villa Dry Cleaners Site, referred to hereinafter as the Subject Property (SP), is located at 1885, 1889-1899 Deer Park Avenue, Town of Babylon, New York. The Subject Property consists of six attached retail stores and two detached adjacent buildings, one used as a retail liquor store, Crazy Billy's Deer Park Liquor Store and Best Way Auto Collision auto body repair shop.

The Subject Property has documented elevated levels of chlorinated solvents in the groundwater and/or the soil gas. A sub slab depressurization (SSD) vapor mitigation system was selected to mitigate provide occupant protection against vapor intrusion. The system was designed and installed by Alpine Environmental Services, Inc.

2 System Design

2.1 General

The vapor mitigation system design involved collecting site-specific data to determine the most effective system components to be used, as well as, the ideal locations for system installation. Design of the sub slab depressurization mitigation system was in accordance with US EPA and American Society of Testing and Materials Guidance Documents. Alpine's design approach involved a three-step process:

1. Collection of site-specific use information. This is an important step used to balance space function with system cost.

2. Perform site-specific pressure field extension testing. This phase involved coring holes through the concrete floor and testing the sub slab pressure field induced in the sub slab aggregate.

3. Analyze the data collected in the first two phases to determine the equipment to be used and the layout of the system.

2.2 Diagnostic Pressure Testing

The site-specific diagnostic pressure testing was performed on May 31, 2011 and June 1, 2011. This involved coring 5-inch test extraction holes and ½" pressure test holes through the concrete floor slab to run a series of pressure tests to characterize the permeability of the sub slab material.

The pressure gradient of each test location was determined with the induction of various static pressures and airflow rates. The pressure gradient data was measured quantitatively in inches of water column.

The test data was analyzed and compared to Alpine's database of vapor/radon mitigation data, for modeling and estimating synergistic effects of multiple extraction points working simultaneously.

3 System Installation

3.1 General

The sub slab depressurization vapor mitigation system has been installed in accordance with good customary practice and in compliance with applicable building codes. The system was in installed in accordance to applicable portions of American Society of Testing and Materials (ASTM) Standard E2121-09.

The system was comprised of nine sub-systems, each with a system fan and

distinct exhaust stack. Each sub system was fitted with a real time pressure gauge. See Table 3.4 below for the identification of each sub system, the number and identification of the subsystem extraction points, the post installation static pressure, and the airflow of each sub system.

3.2 Materials

The following construction materials were utilized:

3.2.1 Fans

- RadonAway RP-265 and GP-501 Fans were used at all locations. All fans carry a five-year manufacturer's warranty. The fan performance is outlined below:

GP SERIES PRODUCT SPECIFICATIONS

The following chart shows fan performance for the GPx01 Series Fan:

Typical CFM Vs Static Suction "WC	1.0"	1.5"	2.0"	2.5"	3.0"	3.5"	4.0"
GP501	95	87	80	70	57	30	5
GP401	93	82	60	38	12	-	-
GP301	92	77	45	10	-	-	-
GP201	82	58	5	-	-	-	-

Maximum Recommended Operating Pressure*		
GP501	3.8" W.C.	(Sea Level Operation)**
GP401	3.0" W.C.	(Sea Level Operation)**
GP301	2.4" W.C.	(Sea Level Operation)**
GP201	1.8" W.C.	(Sea Level Operation)**

**Reduce by 10% for High Temperature Operation*
***Reduce by 4% per 1000 feet of altitude*

Power Consumption @ 120 VAC	
GP501	70 - 140 watts
GP401	60 - 110 watts
GP301	55 - 90 watts
GP201	40 - 60 watts

Inlet/Outlet: 3.5" OD (3.0" PVC Sched 40 size compatible)
Mounting: Fan may be mounted on the duct pipe or with integral flanges.
Weight: 12 lbs.
Size: 13H" x 12.5" x 12.5"
Recommended ducting: 3" or 4" Schedule 20/40 PVC Pipe
Storage temperature range: 32 - 100 degrees F.
Normal operating temperature range: -20 - 120 degrees F.
Maximum inlet air temperature: 80 degrees F.
Continuous Duty
Class B Insulation
3000 RPM
Thermally protected
Rated for Indoor or Outdoor Use
GP301C / GP501C Rated for Commercial Use

LISTED Electric Fan ETL Tested to UL Std. 507

RP SERIES PRODUCT SPECIFICATIONS

The following chart shows fan performance for the RP Series Fan:

Typical CFM Vs Static Pressure "WC									
	0"	.25"	.5"	.75"	1.0"	1.25"	1.5"	1.75"	2.0"
RP140	135	103	70	14	-	-	-	-	-
RP145	166	146	126	104	82	61	41	21	3
RP260	272	220	176	138	103	57	13	-	-
RP265	334	291	247	210	176	142	116	87	52
RP380*	497	401	353	281	220	176	130	80	38

* Tested with 6" inlet and discharge pipe.

Power Consumption 120 VAC, 60Hz 1.5 Amp Maximum		Maximum Recommended Operating Pressure* (Sea Level Operation)**	
RP140	17 - 21 watts	RP140	0.8" W.C.
RP145	41 - 72 watts	RP145	1.7" W.C.
RP260	52 - 72 watts	RP260	1.5" W.C.
RP265	91 - 129 watts	RP265	2.2" W.C.
RP380	95 - 152 watts	RP380	2.0" W.C.

**Reduce by 10% for High Temperature Operation*
***Reduce by 4% per 1000 feet of altitude*

	Size	Weight	Inlet/Outlet
RP140	8.5H" x 9.7" Dia.	5.5 lbs.	4.5" OD (4.0" PVC Sched 40 size compatible)
RP145	8.5H" x 9.7" Dia.	5.5 lbs.	4.5" OD (4.0" PVC Sched 40 size compatible)
RP155	8.5H" x 9.7" Dia.	5.5 lbs.	5.0" OD
RP260	8.6H" x 11.75" Dia.	5.5 lbs.	6.0" OD
RP265	8.6H" x 11.75" Dia.	6.5 lbs.	6.0" OD
RP380	10.53H" x 13.41" Dia.	11.5 lbs.	8.0" OD

Recommended ducting: 3" or 4" RP1xx/2xx, 6" RP380, Schedule 20/40 PVC Pipe
Mounting: Mount on the duct pipe or with optional mounting bracket.
Storage temperature range: 32 - 100 degrees F.
Normal operating temperature range: -20 - 120 degrees F.
Maximum inlet air temperature: 80 degrees F.
Continuous Duty
Class B Insulation
Thermally protected
3000 RPM
Rated for Indoor or Outdoor Use

LISTED Electric Fan ETL 77728 Tested to UL Std. 507 2100 HVI CERTIFIED

3.2.2 Pipe/ Pipe Connectors/Pipe Fasteners

- Schedule 40 PVC pipe and fittings (3 or 4 inch) were used in all areas.
- Extraction points were sealed into the concrete floor slab with a floor flange, sealed air tight, with polyurethane caulk.
- A hanger secured horizontal pipe runs at least every six feet and vertical pipe runs at least every eight feet.

3.2.3 Electrical

- Exterior electrical switches were rated for exterior installation.
- All electrical wiring was BX wire.
- All vapor mitigation fans were connected to a dedicated circuit breaker when space and access was available and all systems were labeled in the electrical panel.

3.2.4 Technical Construction Details

- All system exhaust termination points were a minimum of 10 feet above grade and away from any intakes or openings.

- Extraction points involved creating an approximately 1 cubic foot void under the concrete floor slab. All concrete slabs cored were noted to be average thickness of 4-6".

- Exhaust stacks from each trunk line terminated no less than 12" above the nearest part of the roof.

- Fire collars or fire rated putty were used on all interior firewall penetrations.

- Each sub system was fitted with a pressure gauge. The initial post installation pressure reading is recorded in Table 3.3 and on each system adjacent to the pressure gauge.

3.3 Post Installation Operating Conditions

System airflow and pressures were checked following installation to verify each sub-system is operating within the fan manufacturers operating requirements. The static system pressures were verified as acceptable against required operating pressure of the fan manufacturer.

The following table summarizes the number and identification of post installation vapor extraction points, initial static operating pressure, and initial air flow of the individual sub systems (each sub system has a separate fan).

TABLE 3.3

Sub System ID	Vapor Extraction Points	Static Operating Pressure ("WC)	Airflow (CFM)	Fan Type
1	1-1 1-2 1-3	1.0"	176	RP265
2	2-1	1.7"	93	RP265
3	3-1	1.7"	93	RP265
4	4-1	2.4"	72	GP501
5	5-1	3.4"	35	GP501
6	6-1	2.5"	70	GP501
7	7-1 7-2	3.2"	46	GP501
8	8-1	1.3"	137	RP265
9	9-1	3.3"	41	GP501

"WC – inches of water column
CFM – cubic feet per minute

3.4 Electrical Inspection

Following the installation of all electrical wiring for the sub slab depressurization vapor mitigation, Certified Electrical Inspections, Inc. of Amityville, NY, inspected the electrical components and issued a "Certificate of Compliance". The certificate is attached in Appendix B.

4 Post Installation Pressure Testing & System Balancing

Post installation pressure diagnostic testing was performed following the installation of the complete vapor mitigation system. The static pressures of the fans were checked under actual sub slab operating conditions. The model of fan used was verified/modified based on the data collected.

Following the installation of the piping, the system Pressure Field Extension (PFE) was verified by drilling, ½" test holes in the floor slab. A digital pressure meter was used to test negative pressure extension. Test holes were sealed with polyurethane caulk following the completion of post installation testing. Test locations and results were documented on the accompanying drawing located in Appendix A.

System airflow and pressures were checked following installation to verify each sub-system is operating within the fan manufacturers operating requirements. The static system pressures were verified as acceptable against required operating pressure of the fan manufacturer.

5 Operation, Maintenance, and Inspection

5.1 System Fan Maintenance

The vapor mitigation system fans are designed to be maintenance free, for the life of the fans. All moving parts of the system are sealed in the fan-housing unit. The fan-housing unit should only be opened by the fan manufacturer. Any attempt to open the fan-housing unit will destroy the factory-installed seals and void the manufacturer's warranty.

5.2 Annual Inspection of Radon Mitigation System

The sub-slab depressurization vapor mitigation system requires an annual inspection. See Appendix B for inspection procedures.

6 Limitations

6.1 Air Permitting/Discharge Testing

The design and installation of the sub slab depressurization vapor mitigation system does not address compliance with any air permitting or testing requirements on federal, state or local levels (if any).

6.2 Source Remediation

The sub slab depressurization vapor mitigation is not intended to address remediation of any source of contamination (i.e. soils, groundwater, etc.). It is solely intended to reduce contaminant vapors entering into buildings.

7 Supporting Documentation

7.1 Appendix A (Maps/Drawings)
Drawing SSD100: SSD Vapor Mitigation System Layout & Post Installation Pressure Test Results

7.2 Appendix B (Supporting Documents)
System Photographs/Component Descriptions
Electrical Inspection Certificate
Operations, Maintenance, and Annual Inspection
Fan Manufacturer Specifications & Warranty

8 Declaration

I Mark Schnitzer, PE, certify that I am currently a NYS registered professional engineer, I had primary direct responsibility for the implementation of the subject construction program, and I certify that the Remedial Work Plan was implemented and that all construction activities were completed in substantial conformance with the DER-approved Remedial Work Plan (or Remedial Design or Plans and Specifications).

Sincerely,

Alpine Environmental Services, Inc.

Mark Schnitzer, P.E.
Environmental Engineer

Alpine Environmental Services, Inc.

Appendix A

Report of Sub-Slab Depressurization
Vapor Mitigation System Installation
Villa Dry Cleaners Site, 1885, 1889-1899 Deer Park Avenue,
Town of Babylon, Suffolk County, New York

Alpine Environmental Services, Inc.

Drawing SSD100: SSD Vapor Mitigation System Layout & Post Installation Pressure Test Results

Report of Sub-Slab Depressurization
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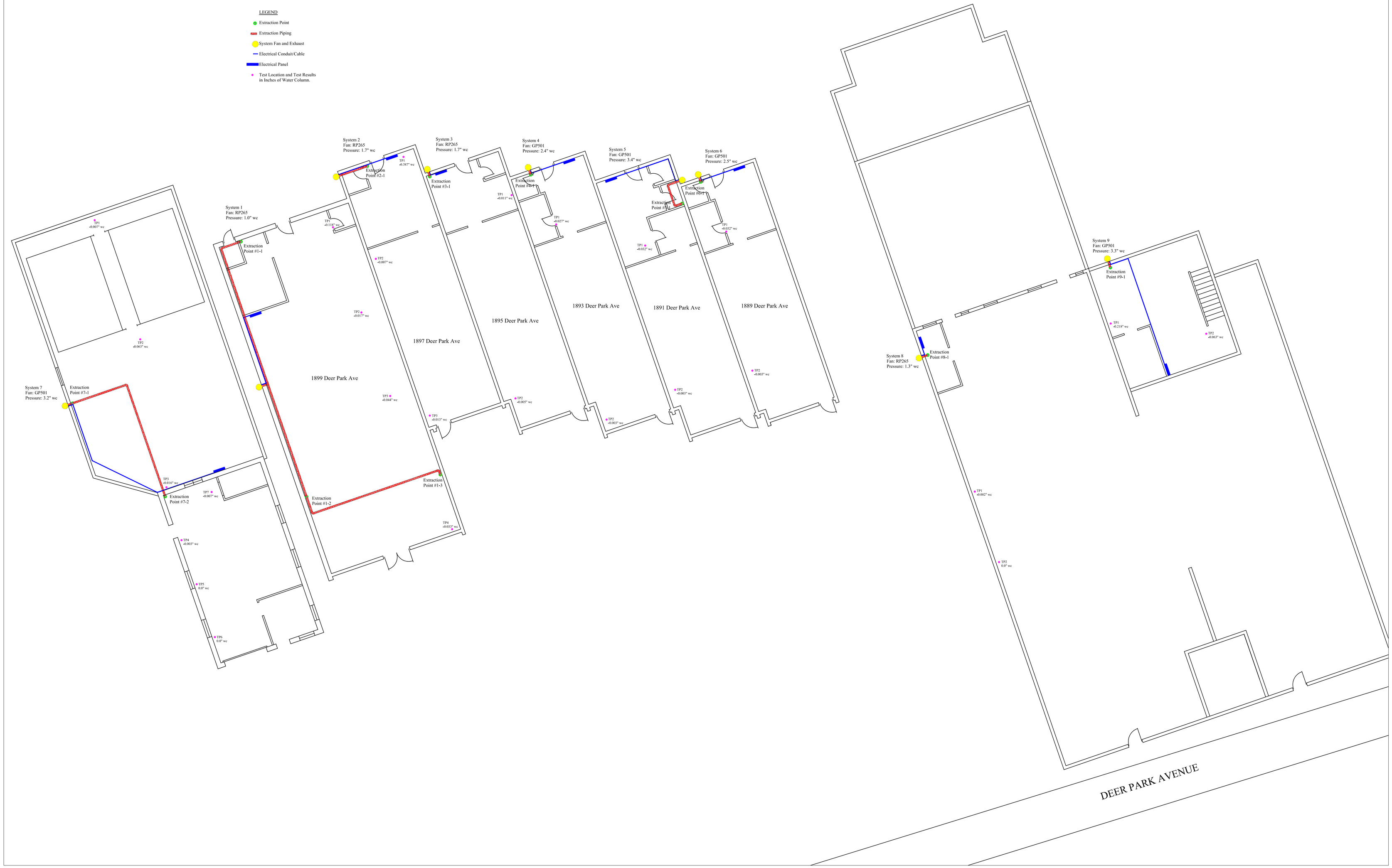
Villa Dry Cleaners Site, 1885, 1889-1899 Deer Park Avenue,
Town of Babylon, Suffolk County, New York

Alpine Environmental Services, Inc., 1146 Central Avenue, Albany, New York 12205
Ph. (518) 453-0146, Fax (518) 453-0175

LEGEND

- Extraction Point
- Extraction Piping
- System Fan and Exhaust
- Electrical Conduit/Cable
- Electrical Panel
- Test Location and Test Results in Inches of Water Column.



Alpine Environmental Services, Inc.

Engineers and Safety Professionals

1146 Central Avenue
Albany, New York 12205
Ph: (518) 453-0146; Fx: (518) 453-0175
Email: marks@alpineenv.com

SSD System Components
1889-1899 Deer Park Ave.
Babylon, New York

NORTH

Scale: Not to Scale

Sheet Title

Sub-Slab Depressurization
Vapor Mitigation System
Layout and Post Installation
Pressure Test Results

SSD 100

Alpine Environmental Services, Inc.

Appendix B

Report of Sub-Slab Depressurization
Vapor Mitigation System Installation
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Ph. (518) 453-0146, Fax (518) 453-0175

Alpine Environmental Services, Inc.

System Photos & Component Descriptions

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Alpine Environmental Services, Inc.

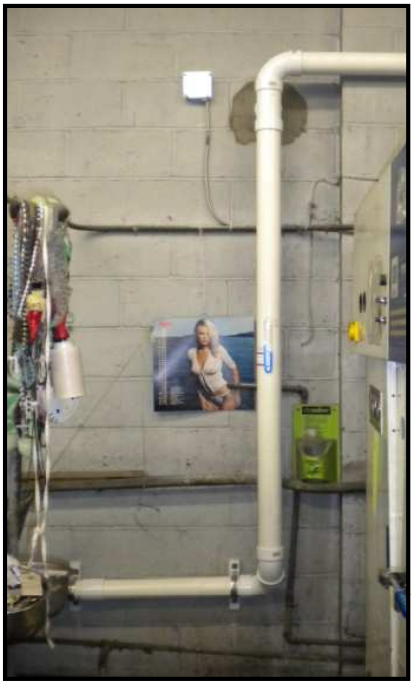
July 2011

Villa Dry Cleaners (Site 1-52-188)
1889 - 1899 Deer Park Ave.
Deer Park, NY
Town of Babylon

System 1 - Villa Cleaners - 1899 Deer Park Ave.

System 1 - fan and discharge piping

System 1 - extraction point 3



System 1 - exit point and system manometer

System 1 - extraction point 2

System 1 - discharge piping

System 2 - Deli - 1897 Deer Park Ave.

System 2 - fan and discharge piping

System 2 - extraction point 1

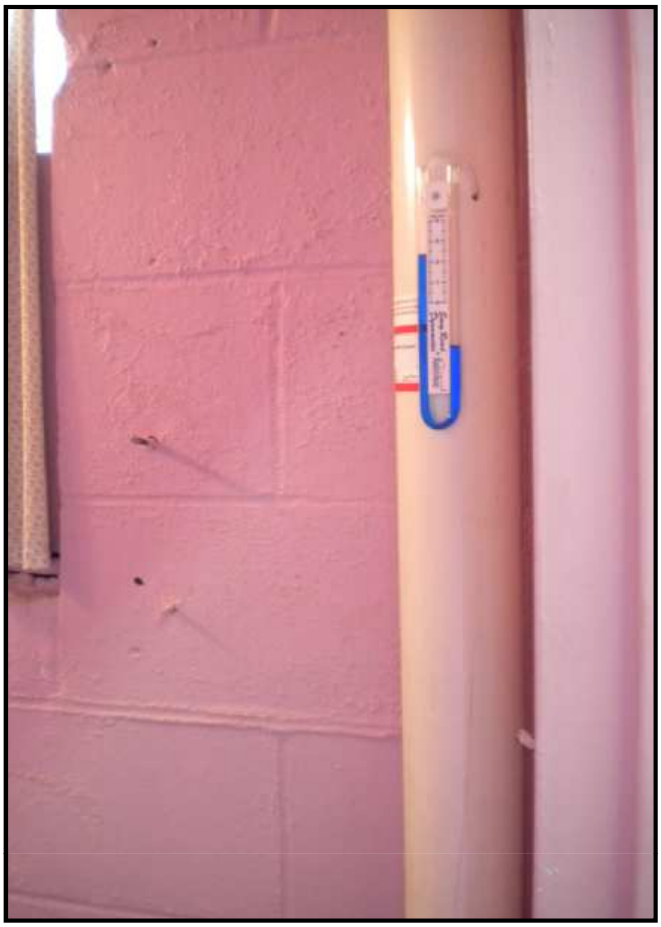
System 3 - Dance Studio (zumba) - 1895 Deer Park Ave.

System 3 - fan and discharge piping

System 3 - extraction point 1

System 4 - Dance Studio - 1893 Deer Park Ave.

System 4 - fan and discharge piping



System 4 - extraction point 1

System 5 - J. T. Insurance - 1891 Deer Park Ave.

System 5 - extraction point 1

System 5 - interior piping

System 6 - Perfect Touch Hair Salon - 1889 Deer Park Ave.

System 6 - extraction point 1

Systems 5 and 6 - fan and discharge piping

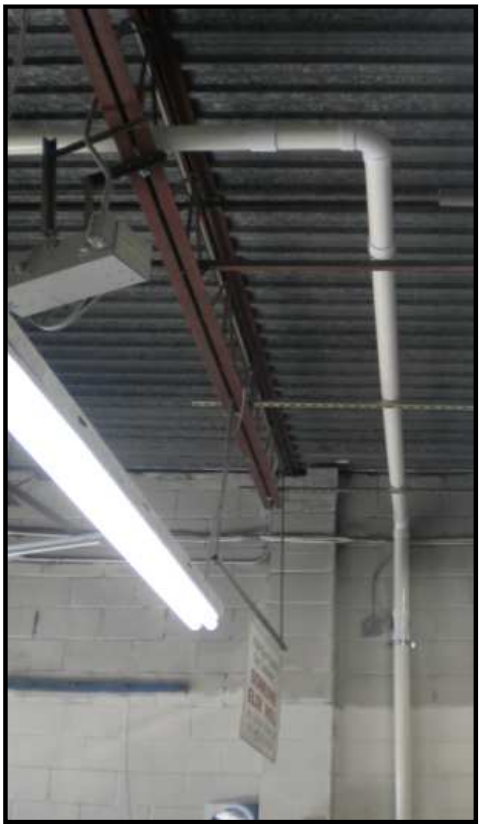
System 7 - Auto Body Shop - 1901 Deer Park Ave.

System 7 - fan and discharge piping

System 7 - extraction point 1

System 7 - extraction point 2

System 7 - extraction point 1



System 7 - interior piping

System 8 - Crazy Billy's - 1887 Deer Park Ave.

System 8 - extraction point 1

System 8 - fan and discharge piping

System 8 - extraction point 1

System 9 - Crazy Billy's - 1887 Deer Park Ave.

System 9 - fan and discharge piping

System 9 - extraction point 1

Alpine Environmental Services, Inc.

Electrical Inspection Certificate

Report of Sub-Slab Depressurization
Vapor Mitigation System Installation
Villa Dry Cleaners Site, 1885, 1889-1899 Deer Park Avenue,
Town of Babylon, Suffolk County, New York

Alpine Environmental Services, Inc., 1146 Central Avenue, Albany, New York 12205
Ph. (518) 453-0146, Fax (518) 453-0175

CERTIFICATE OF COMPLIANCE

CERTIFIED ELECTRICAL INSPECTIONS, INC.

188 PARK AVENUE, AMITYVILLE, NY 11701

CERTIFIES THAT

Upon the application of	Upon premises owned by
Alpine Environmental Services 1146 Central Ave. Albany, NY12205	Villa Cleaners 1889-1899 Deer Park Ave. Babylon, NY 11729

Located at 1889-1899 Deer Park Ave., Babylon, NY 11729

Application Number: 11-05002671 Certificate Number: 11-05002671

Section: **Block:** **Lot:** **Building Permit:**

Described as a Commercial occupancy, wherein the premises electrical system consisting of electrical devices and wiring, described below, located in/on the premises at:

8 Commercial Stores

A visual inspection of the premises electrical system, limited to electrical devices and wiring to the extent detailed herein, was conducted in accordance with the requirements of the applicable code and/or standard promulgated by the State of New York, Department of State Code Enforcement and Administration, or other authority having jurisdiction, and found to be in compliance therewith on the 06th Day of July 2011.

Name	QTY	Amperage	Voltage	Circuit Type
Exhaust Fan	9	15 AMP	120 V	Dedicated Circuit
Switch	9	15 AMP	120 V	Dedicated Circuit

JAMES SMITH
Electrical Inspector

This certificate may not be altered in any way and is validated only by the presence of a raised seal at the location indicated.

Alpine Environmental Services, Inc.

Operations and Maintenance

Report of Sub-Slab Depressurization
Vapor Mitigation System Installation

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Alpine Environmental Services, Inc., 1146 Central Avenue, Albany, New York 12205
Ph. (518) 453-0146, Fax (518) 453-0175

Alpine Environmental Services, Inc.

Annual Inspection Procedure & Operations and Maintenance
Sub-Slab Depressurization Vapor Mitigation System at
Villa Dry Cleaners Site, 1885, 1889-1899 Deer Park Avenue,
Town of Babylon, Suffolk County, New York

1.0 FAN MAINTENANCE

The sub-slab depressurization vapor mitigation system fans are designed to be maintenance free, for the life of the fans. All moving parts of the system are sealed in the fan-housing unit. The fan-housing unit should only be opened by the fan manufacturer. Any attempt to open the fan-housing unit will destroy the factory-installed seals and void any warranty, parts and labor, on the entire venting system.

2.0 ANNUAL SUB SLAB VENTING SYSTEM INSPECTION (INSPECT EACH SUB-SYSTEM INDEPENDENTLY)

2.1 System Piping, Fan, and Connections

Inspect the exposed system piping, system fan, and connections for any breach or damage. Repair or replace any observed damage effecting system operation.

2.2 Slab/System Interface Seals

Inspect the caulk seal at each of the extraction points (a breach in the seal should produce an air leak noise). If breech is observed, caulk with polyurethane caulk.

2.3 System Pressure

Observe the static system pressure in each system/system component on the manometer. Record the system pressure in the chart provided.
Determine if static pressure has an unacceptable change. If so, evaluate the fan for problems. If no problems are identified with the fan, perform sub slab pressure readings to verify the sub slab pressure field is sufficient under the “new” static operating pressure. If acceptable pressure field extension cannot be achieved, replace the system fan.

2.4 Electrical

Observe electrical components for damage. Repair any damaged components.
Test system electrical disconnects/ switches for functionality. Repair any dysfunctional components.
Record electrical meter reading (if applicable).

3.0 INSPECTION DOCUMENTATION

Complete an inspection documentation form for each annual inspection and maintain a logbook of the annual inspections for the life of the vapor mitigation system.

Annual Inspection Documentation Form
Sub-Slab Depressurization Vapor Mitigation System at
Villa Dry Cleaners Site, 1885, 1889-1899 Deer Park Avenue,
Town of Babylon, Suffolk County, New York
System Installation Date: July 7, 2011

Date of Inspection:_____

Name of Inspector:_____

Company Name:_____

Address:_____

Phone#:_____

Sub System ID	Initial Static Operating Pressure*	Maximum Static Operating Pressure for System Fan	Record Observed Static Operating Pressure	Observations/ Repair Notes
1	1.0”	2.2"		
2	1.7”	2.2"		
3	1.7”	2.2"		
4	2.4”	3.8"		
5	3.4”	3.8"		
6	2.5”	3.8"		
7	3.2”	3.8"		
8	1.3”	2.2"		
9	3.3”	3.8"		

*Pressures in inches of water column

Alpine Environmental Services, Inc.

Fan Specifications & Warranty

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Ph. (518) 453-0146, Fax (518) 453-0175

IMPORTANT INSTRUCTIONS TO INSTALLER

Inspect the GPx01/XP/XR Series Fan for shipping damage within 15 days of receipt. Notify RadonAway of any damages immediately. Radonaway is not responsible for damages incurred during shipping. However, for your benefit, Radonaway does insure shipments.

There are no user serviceable parts inside the fan. **Do not attempt to open.** Return unit to factory for service.

Install the GPx01/XP/XR Series Fan in accordance with all EPA standard practices, and state and local building codes and state regulations.

WARRANTY

Subject to any applicable consumer protection legislation, RadonAway warrants that the GPX01/XP/XR/RP Series Fan (the "Fan") will be free from defects in materials and workmanship for a period of 90 days from the date of purchase (the "Warranty Term").

RadonAway will replace any Fan which fails due to defects in materials or workmanship. The Fan must be returned (at Owner's cost) to the RadonAway factory. Any Fan returned to the factory will be discarded unless the Owner provides specific instructions along with the Fan when it is returned regardless of whether or not the Fan is actually replaced under this warranty. Proof of purchase must be supplied upon request for service under this Warranty.

This Warranty is contingent on installation of the Fan in accordance with the instructions provided. This Warranty does not apply where any repairs or alterations have been made or attempted by others, or if the unit has been abused or misused. Warranty does not cover damage in shipment unless the damage is due to the negligence of RadonAway.

5 YEAR EXTENDED WARRANTY WITH PROFESSIONAL INSTALLATION.

RadonAway will extend the Warranty Term of the fan to 5 years from date of manufacture if the Fan is installed in a professionally designed and professionally installed radon system or installed as a replacement fan in a professionally designed and professionally installed radon system. Proof of purchase and/or proof of professional installation may be required for service under this warranty. Outside the Continental United States and Canada the extended Warranty Term is limited to one (1) year from the date of manufacture.

RadonAway is not responsible for installation, removal or delivery costs associated with this Warranty.

EXCEPT AS STATED ABOVE, THE GPx01/XP/XR/RP SERIES FANS ARE PROVIDED WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

IN NO EVENT SHALL RADONAWAY BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF, OR RELATING TO, THE FAN OR THE PERFORMANCE THEREOF. RADONAWAY'S AGGREGATE LIABILITY HEREUNDER SHALL NOT IN ANY EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE OF SAID PRODUCT. THE SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY SHALL BE THE REPAIR OR REPLACEMENT OF THE PRODUCT, TO THE EXTENT THE SAME DOES NOT MEET WITH RADONAWAY'S WARRANTY AS PROVIDED ABOVE.

For service under this Warranty, contact RadonAway for a Return Material Authorization (RMA) number and shipping information. No returns can be accepted without an RMA. If factory return is required, the customer assumes all shipping cost to and from factory.

RadonAway
3 Saber Way
Ward Hill, MA 01835
TEL. (978) 521-3703
FAX (978) 521-3964

Record the following information for your records:

Serial No._____
Purchase Date_____

RP SERIES PRODUCT SPECIFICATIONS

The following chart shows fan performance for the RP Series Fan:

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Recommended ducting: 3" or 4" RP1xx/2xx, 6" RP380, Schedule 20/40 PVC Pipe

Mounting: Mount on the duct pipe or with optional mounting bracket.

Storage temperature range: 32 - 100 degrees F.

Normal operating temperature range: -20 - 120 degrees F.

Maximum inlet air temperature: 80 degrees F.

Continuous Duty

Class B Insulation

Thermally protected

3000 RPM

Rated for Indoor or Outdoor Use

LISTED Electric Fan ETL® 77728 Tested to UL Std. 507 ® 2100 HVI CERTIFIED

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GP201	82	58	5	-	-	-	-

Maximum Recommended Operating Pressure*		
GP501	3.8" W.C.	(Sea Level Operation)**
GP401	3.0" W.C.	(Sea Level Operation)**
GP301	2.4" W.C.	(Sea Level Operation)**
GP201	1.8" W.C.	(Sea Level Operation)**

**Reduce by 10% for High Temperature Operation*

***Reduce by 4% per 1000 feet of altitude*

Power Consumption @ 120 VAC	
GP501	70 - 140 watts
GP401	60 - 110 watts
GP301	55 - 90 watts
GP201	40 - 60 watts

Inlet/Outlet: 3.5" OD (3.0" PVC Sched 40 size compatible)

Mounting: Fan may be mounted on the duct pipe or with integral flanges.

Weight: 12 lbs.

Size: 13H" x 12.5" x 12.5"

Recommended ducting: 3″ or 4" Schedule 20/40 PVC Pipe

Storage temperature range: 32 - 100 degrees F.

Normal operating temperature range: -20 - 120 degrees F.

Maximum inlet air temperature: 80 degrees F.

Continuous Duty

Class B Insulation

3000 RPM

Thermally protected

Rated for Indoor or Outdoor Use

GP301C / GP501C Rated for Commercial Use

LISTED Electric Fan ETL® Tested to UL Std. 507