Diamond Auto Service Site

Bay Shore, Suffolk County, New York

Final Engineering Report

NYSDEC Site Number: C152196

Prepared for:

Diamond Auto Service, Inc. David Watson, Volunteer 71 Cleveland Avenue Bay Shore, NY 11706

Prepared by:

J.R. Holzmacher, P.E. LLC 3555 Veterans Memorial Highway, Suite A Ronkonkoma, New York 11779-7636 631-234-2220

NOVEMBER 2013

CERTIFICATIONS

I, <u>James R. Holzmacher P.E</u>., am currently a registered professional engineer licensed by the State of New York, I had primary direct responsibility for implementation of the remedial program activities, and I certify that the Remedial Action Work Plan was implemented and that all construction activities were completed in substantial conformance with the Departmentapproved Remedial Action Work Plan.

I certify that the data submitted to the Department with this Final Engineering Report demonstrates that the remediation requirements set forth in the Remedial Action Work Plan and in all applicable statutes and regulations have been or will be achieved in accordance with the time frames, if any, established in for the remedy.

I certify that all use restrictions, Institutional Controls, Engineering Controls, and/or any operation and maintenance requirements applicable to the Site are contained in an environmental easement created and recorded pursuant ECL 71-3605 and that all affected local governments, as defined in ECL 71-3603, have been notified that such easement has been recorded.

I certify that a Site Management Plan has been submitted for the continual and proper operation, maintenance, and monitoring of all Engineering Controls employed at the Site, including the proper maintenance of all remaining monitoring wells, and that such plan has been approved by Department.

I certify that all documents generated in support of this report have been submitted in accordance with the DER's electronic submission protocols and have been accepted by the Department.

I certify that all data generated in support of this report have been submitted in accordance with the Department's electronic data deliverable and have been accepted by the Department.

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, J. Robert Holzmacher, of J.R. Holzmacher P.E. LLC, am certifying as Owner's Designated Site Representative for the site.

James R. Holzmacher P.E.

11/01/2013

Many

NYS Professional Engineer #

Date

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LIST OF ACRONYMS

Acronym	Definition
BCA	Brownfield Cleanup Agreement
FER	Final Engineering Report
HASP	Health and Safety Plan
HDPE	High Density Polyethylene
JRH	J.R. Holzmacher P.E., LLC
PCV	Poly Vinyl Chloride Plastic
PID	Photo Ionization Detectors
RAO	Remedial Action Objectives
RAWP	Remedial Action Work Plan
RI	Remedial Investigation
SSDS	Sub Slab Depressurization System

FINAL ENGINEERING REPORT

1.0 BACKGROUND AND SITE DESCRIPTION

Diamond Auto Service entered into a Brownfield Cleanup Agreement (BCA) with the New York State Department of Environmental Conservation (NYSDEC) in November 2005, to investigate and remediate a 0.5-acre property located in Bay Shore, New York. The property was remediated to commercial use.

The site is located in the County of Suffolk, New York and is identified as a portion of Block 122 and Lots 37, 38, 45 and 48 on the Suffolk County Tax Map # 120. The site is situated on an approximately 0.5 acre area bounded by buildings to the north, south, and east, and Cleveland Avenue to the west (see Figure 1). The boundaries of the site are fully described in Appendix A: Survey Map, Metes, and Bounds.

An electronic copy of this FER with all supporting documentation is included as Appendix B.

1.1 OPERATION OF PASSIVE SSDS

To address the elevated concentrations of tetrachloroethene (and potential degradation products) in the sub slab vapor and to protect its employees, Volunteer retained Clear View Environmental Service to install a passive sub-slab depressurization system (SSDS) system in March 2009. Volunteer also applied a sealant (four coats of Delta 2 part epoxy sealer) to the building slab in April 2009.

The SSDS was installed below the building slab to prevent any potential contaminant vapors in the soil from entering the occupied building space.

- The two RI vapor monitoring points (VP-1 and VP-2) were replaced by four-inch diameter slotted PVC pipe-open from the base of the slab to five feet below grade (groundwater at the time).
- The two vertical vapor collection points work in conjunction with a 20 foot length of four- inch diameter perforated High Density Polyethylene (HDPE) pipe set two feet below the slab in a bed of gravel.

- The slotted subsurface pipes were connected together using 2-inch diameter non perforated PVC pipe.
- Two- inch vertical non-perforated *PVC* pipe was installed to convey the collected sub slab gas to a roof wind turbine fan for discharge into the atmosphere.
- Sampling ports were created for of the three legs of the system so monitoring can be conducted.
- The passive system had been monitored on a monthly basis to ensure it is intact and functioning. Vapor readings are collected from each leg of the system on a periodic basis using a PID. There have been no PID Readings.

2.0 SUMMARY OF SITE REMEDY

2.1 REMEDIAL ACTION OBJECTIVES

Based on the results of the Remedial Investigation, the following Remedial Action Objectives (RAOs) were identified for this site.

2.1.2 Sub-Slab Vapor RAO

The sub-slab concentrations of tetrachloroethene combined with the indoor concentrations exceed the values presented in decision matrices in the NYSDOH *Guidance for Evaluating Soil Vapor Intrusion in the State of New York*. The detected concentrations according to Soil Vapor/Indoor Air Matrix 2 warrant mitigation.

The RAO is to reduce the concentrations of tetrachloroethene (and potential degradation products) in both sub slab vapor and indoor air below NYSDOH guidelines (Soil Vapor/Indoor Air Matrix 2) so vapor intrusion no longer presents a risk to building workers.

2.2 DESCRIPTION OF SELECTED REMEDY

The site was remediated in accordance with the remedy selected by the NYSDEC in the RAWP dated November 15, 2012.

The factors considered during the selection of the remedy are those listed in 6NYCRR 375-1.8. The following are the components of the selected remedy:

- 1. The Preferred Remedy for the Site consists of the following components:
- Conversion of the passive SSDS to active;
- Diagnostic testing to determine its effectiveness;
- Collection of post-mitigation air samples;
- Sealing of the building slab;
- Determining the need for treatment of off gas; and
- Monitoring, sampling and maintenance of the SSDS.

- 2. Execution and recording of an Environmental Easement to restrict land use and prevent future exposure to any contamination remaining at the site.
- 3. Development and implementation of a Site Management Plan for the management of remaining contamination as required by the Environmental Easement, which includes plans for: (1) Institutional and Engineering Controls, (2) monitoring, (3) operation and maintenance and (4) reporting;
- 4. A provision for evaluation of the potential for soil vapor intrusion for any additional buildings developed or redeveloped on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion.
- 5. Periodic certification of the institutional and engineering controls listed above.

3.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED

Remedial activities completed at the Site were conducted in accordance with the NYSDEC-approved Remedial Action Work Plan (RAWP) for the Diamond Auto site (November 2012). All deviations from the RAWP are noted below.

3.1 GOVERNING DOCUMENTS

The SSDS design document dated June 27, 2013 was approved by DEC on July 9, 2013.

3.1.1 Site Specific Health & Safety Plan (HASP)

All remedial work performed under this Remedial Action was in full compliance with governmental requirements, including Site and worker safety requirements mandated by Federal OSHA.

The Health and Safety Plan (HASP) was complied with for all remedial and invasive work performed at the Site.

3.1.2 Quality Assurance Project Plan (QAPP)

The QAPP was included as Section 9 of the Remedial Action Work Plan (RAWP) and is also included in the SSDS design Document approved by the NYSDEC. The QAPP describes the specific policies, objectives, organization, functional activities and quality assurance/ quality control activities designed to achieve the project data quality objectives.

3.1.3 Construction Quality Assurance Plan (CQAP)

A Construction Quality Assurance Plan(s) (CQAPs) was not required. The SSDS Design Document provides a detailed description of the observation and testing activities that were used to monitor construction quality and confirm that remedial construction was in conformance with the remediation objectives and specifications.

Inspections of all remedial components installed at the site are conducted at the frequency specified in the SMP Monitoring Plan schedule. A comprehensive site-wide inspection will be conducted annually, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

• Whether Engineering Controls continue to perform as designed;

- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP ;
- Achievement of remedial performance criteria;
- Sampling and analysis of appropriate media during monitoring events;
- If site records are complete and up to date; and
- Changes, or needed changes, to the remedial or monitoring system;

Inspections will be conducted in accordance with the procedures set forth in the Monitoring Plan of this FER (Section 3.0). The reporting requirements are outlined in the Periodic Review Reporting section of this FER (Section 3.9).

If an emergency, such as a natural disaster or an unforeseen failure of the engineering control (SSDS) occurs, an inspection will be conducted by a qualified environmental professional within 5 days of the event to verify the effectiveness of the system.

Notifications will be submitted by the property owner to the NYSDEC as needed for the following reasons:

- 60-day advance notice of any proposed changes in site use that are required under the terms of the Brownfield Cleanup Agreement (BCA), 6NYCRR Part 375, and/or Environmental Conservation Law.
- Notice within 48-hours of any damage or defect to the foundations structures that reduces or has the potential to reduce the effectiveness of other Engineering Controls and likewise any action to be taken to mitigate the damage or defect.
- Verbal notice by noon of the following day of any emergency, such as a fire, flood, or earthquake that reduces or has the potential to reduce the effectiveness of Engineering Controls in place at the site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.
- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action shall be submitted to the NYSDEC within 45 days and shall describe and document actions taken to restore the effectiveness of the ECs.

Forms and any other information generated during regular monitoring events and inspections will be kept on file on-site. All forms, and other relevant reporting formats used

during the monitoring/inspection events, will be subject to approval by NYSDEC and submitted at the time of the Periodic Review Report, as specified in the Reporting Plan of this FER.

* The frequency of events will be conducted as specified until otherwise approved by NYSDEC

3.1.4 Contractors Site Operations Plans (SOPs)

The Remediation Engineer reviewed all plans and submittals for this remedial project (i.e. those listed above plus contractor and subcontractor submittals) and confirmed that they were in compliance with the RAWP. All remedial documents were submitted to NYSDEC and NYSDOH in a timely manner and prior to the start of work.

3.1.5 Community Participation Plan

The Community Participation Plan approved in March 2006 has been followed throughout the project.

3.2 REMEDIAL PROGRAM ELEMENTS

3.2.1 Contractors and Consultants

- The SSDS installer was Clear View Environmental Services of Holtsville. Clear View has also been retained by the Volunteer to monitor and maintain the system.
- J.Robert Holzmacher P.E. is the certifying Engineer of Record responsible for inspection of the work.

3.2.2 Site Preparation

Documentation of agency approvals required by the RAWP is included in Appendix D.

All SEQRA requirements and all substantive compliance requirements for attainment of applicable natural resource or other permits were achieved during this Remedial Action.

3.2.3 General Site Controls

Site-wide inspections will be performed on a regular schedule at a minimum of once a year. Site-wide inspections will also be performed after all severe weather conditions that may affect Engineering Controls or monitoring devices. During these inspections, the Site-Wide Inspection form will be completed as per the SMP. The form will compile sufficient information to assess the following:

An evaluation of the condition and continued effectiveness of the SSDS;

- General site conditions at the time of the inspection;
- The site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection;
- Compliance with schedules included in the Operation and Maintenance Plan; and
- Confirmation that site records are up to date.

3.2.4 Reporting

All monitoring results are reported to NYSDEC on a periodic basis in the Periodic Review Report or by letter report which will also be prepared, if required by NYSDEC, subsequent to each sampling event. The report (or letter) will include, at a minimum:

Date of event;

- Personnel conducting sampling;
- Description of the activities performed;
- Type of samples collected (e.g., sub-slab vapor, indoor air, outdoor air, etc.);
- Copies of all field forms completed (e.g., well sampling logs, chain-of-custody documentation, etc.);
- Sampling results in comparison to appropriate standards/criteria;
- A figure illustrating sample type and sampling locations;
- Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (to be submitted electronically in the NYSDEC-identified format); and
- Any observations, conclusions, or recommendations;

Data are reported in hard copy or digital format as determined by NYSDEC. A summary of the monitoring program deliverables are summarized in the below Table.

Task	Reporting Frequency*
Sub-slab Soil Vapor/ Indoor Air	As requested
Sub-slab Depressurization System	Quarterly
Inspection	
Site wide Inspection Peport	Annually, to be submitted with Annual
Site-white inspection report	Certification Report

Schedule of Monitoring/Inspection Reports

3.3 REMEDIAL PERFORMANCE/DOCUMENTATION SAMPLING

All sampling and analyses will be performed in accordance with the approved procedures in the RI work prepared for the Site by JRH and the requirements of the Quality Assurance Manual (QAM) of the laboratory, Chemtech of Mountainside, New Jersey (Appendix E). Main Components of the QAM and Work Plan include:

Sample Tracking and Custody;

- Calibration Procedures:
 - All field analytical equipment will be calibrated immediately prior to each day's use. Calibration procedures will conform to manufacturer's standard instructions.
 - The laboratory will follow all calibration procedures and schedules as specified in USEPA SW-846 and subsequent updates that apply to the instruments used for the analytical methods.
- Analytical Procedures;

Internal QC and Checks;

- QA Performance and System Audits;
- Preventative Maintenance Procedures and Schedules;
- Corrective Action Measures.
- Sampling Program:
 - Sample containers will be properly washed, decontaminated, and appropriate preservative will be added (if applicable) prior to their use by the analytical laboratory. Containers with preservative will be tagged as such.
 - Sample holding times will be in accordance with the NYSDEC ASP Category B requirements.

- Field QC samples (e.g., trip blanks, coded field duplicates, and matrix spike/matrix spike duplicates) will be collected as necessary.
- Preparation of a Data Usability Summary Report (DUSR), which will present the results of data validation, including a summary assessment of laboratory data packages, sample preservation and chain of custody procedures, and a summary assessment of precision, accuracy, representativeness, comparability, and completeness for each analytical method.

3.4 CONTAMINATION REMAINING AT THE SITE

The SSDS will address contaminated soil vapor that remains beneath the on-site building. The SSDS will continue to run until sub-slab soil vapor and indoor air data demonstrate that there are no current or potential soil vapor intrusion concerns.

The NYSDEC will be kept apprised of all activities related to the SSDS as part of the Site Management Plan. Generally, mitigation processes are considered completed when effectiveness monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when remedial processes are complete is provided in Section 6.6 of NYSDEC DER-10.

The SSDS will remain operational until it is no longer necessary to address current or potential exposures. This will be determined by periodic sub-slab soil vapor/indoor air sampling and communications with the NYSDEC.

The SSDS will not be shut down unless approved in advance by the NYSDEC and the NYSDOH. It is understood that the NYSDEC and the NYSDOH will require sampling, consisting of the collection of sub-slab soil vapor and indoor air samples to support shutdown. The Volunteer will provide a shutdown plan to the NYSDEC proposing sampling locations and frequencies. The Volunteer will await NYSDEC and NYSDOH review and approval before taking any action.

3.5 COVER SYSTEM

Exposure to remaining soil vapor in soil/fill at the site is prevented by a soil cover system placed over the site. This cover system is comprised of a minimum of 12 inches of clean soil, asphalt pavement, concrete-covered sidewalks, and the sealed concrete building slab Figure 2 shows the location of each cover type built at the Site system.

3.6 OTHER ENGINEERING CONTROLS

Because residual contaminated vapor exists beneath the site, Engineering Controls (EC) are required to protect human health and the environment. The site has the active SSDS as the primary Engineering Controls. The remedy for the site did not require the construction of any other engineering control systems.

Procedures for monitoring, operating and maintaining the SSDS system are provided in the Operation and Maintenance Plan in Section 4 of the Site Management Plan (SMP). The Monitoring Plan also addresses inspection procedures that must occur after any severe weather condition has taken place that may affect on-site ECs.

3.7 INSTITUTIONAL CONTROLS

The site remedy requires that an environmental easement be placed on the property to (1) implement, maintain and monitor the Engineering Controls; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the site to commercial/industrial uses only.

The environmental easement for the site was executed by the Department on October 18, 2012, and filed with the Suffolk County Clerk on January 15, 2013. The County Recording Identifier number for this filing is12-13137. A copy of the easement and proof of filing is provided in Appendix C.

3.8 DEVIATIONS FROM THE REMEDIAL ACTION WORK PLAN

• There have been no known deviations from the RAWP.

FIGURES



J.R. HOLZMACHER P.E., LLC The Third Generation of Excellence	LOCATION MAP	dwn: AJZ	SCALE: $1'' = 100'$	date: 1-18-13	PROJECT NO.: Diamo 11-01
In Water Supply, Water Resources, Civil and Environmental Engineering 3555 VETERANS MEMORIAL HIGHWAY,	DIAMOND AUTO SERVICE, INC. 71-73 CLEVELAND AVENUE	chkd: JMD	APPD: JMD	REV.:	NOTES:
SUITE A, RONKONKOMA, NY 11779 PHONE # (631) 234-2220 FAX # (631) 234-2221 E-MAIL: info@holzmacher.com	BAY SHORE, NEW YORK	FIGURE NO.:	1		





APPENDIX A

SURVEY MAP, METES AND BOUNDS

THE ENGINEERING AND INSTITUTIONAL CONTROLS for the Easement are set forth in more detail in the Site Management Plan ("SMP"). A copy of the SMP must be obtained by any party with an interest in the property. The SMP may be obtained from the New York State Department of Environmental Conservation, Division of Environmental Remediation, Site Control Section, 625 Broadway, Albany, NY 12233 or at derweb@gw.dec.state.ny.us.



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EXISTING CONDITIONS AT LOTS 39 THRU 44 INCL. P/O LOTS 37, 38, 45, 46 MAP OF EDGEWOOD OCTOBER 15, 1891 FILE No. 120 SITUATED AT BRENTWOOD TOWN OF ISLIP UFFOLK COUNTY NEW YORK	PREPARED FOR: Diamond Auto Service C/O David Watson 71 Cleveland Ave. Bay Shore, N.Y. 11706 631 595-1862	F.C. Watson Land Surveyor P.C. P.O. Box 178 Brightwaters, N.Y. 11718 631 328—3422 ph 631 677—3202 fax fcwatson@verizon.net					
erence — being and intended to be the same premises conveyed to itson from Diamond Auto Service, Inc., by deed dated May 11,	S.C.T.M. 0500-179-04-114	SIZE	FSCM NO.		DWG NO.		REV
d recorded on May 30, 2006 in the Suffolk County Clerk's Office in 452 at Page 555	SURVEYED4-12-2002 UPDATED 4-10-2012	SCALE	1" = 20'			SHEET 1 OF 1	

ENVIRONMENTAL EASEMENT DESCRIPTION :

DEPARTMENT SITE NUMBER : C152196

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND, WITH THE BUILDINGS AND IMPROVEMENTS THEREON ERECTED, SITUATE, LYING AND BEING IN BRENTWOOD, IN THE TOWN OF ISLIP, COUNTY OF SUFFOLK AND STATE OF NEW YORK, KNOWN AND DESIGNATED AS LOTS 39 TO 44 BOTH INCLUSIVE AND PARTS OF LOTS 37, 38, 45 AND 46 IN BLOCK 122 ON A CERTAIN MAP ENTITLED "MAP OF EDGEWOOD PROPERTY OF METROPOLITAN INVESTMENT COMPANY, NUMBERS 1 AND 2, FILED IN THE OFFICE OF THE CLERK OF THE COUNTY OF SUFFOLK ON OCTOBER 5, 1891 AS MAP NUMBER 120, WHICH SAID LOTS AND PARTS OF LOTS WHEN TAKEN TOGETHER ARE MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS :

BEGINNING AT A POINT ON THE EASTERLY SIDE OF CLEVELAND AVENUE, DISTANCE OF 459.50 FEET SOUTHERLY FROM THE CORNER FORMED BY THE INTERSECTION OF THE SOUTHERLY SIDE OF SOUTH SECOND STREET WITH THE EASTERLY SIDE OF CLEVELAND AVENUE, AS SAID STREETS ARE LAID OUT AND SHOWN ON THE ABOVE MAP:

THENCE:

SOUTH 88 DEGREES 58 MINUTES 10 SECONDS EAST 200.00 FEET;

THENCE SOUTH 01 DEGREES 01 MINUTES 50 SECONDS WEST, 100.00 FEET;

THENCE NORTH 88 DEGREES 58 MINUTES 10 SECONDS WEST, 200.00 FEET;

THENCE NORTH 01 DEGREES 01 MINUTES 50 SECONDS EAST ALONG THE EASTERLY SIDE OF CLEVELAND AVENUE TO THE PLACE OR POINT OF BEGINNING.

LOT AREA = 20,000 SQ. FT.

APPENDIX B

DIGITAL COPY OF THE FER (CD)

APPENDIX C

ENVIRONMENTAL EASEMENT



<u>^</u>,

SUFFOLK COUNTY CLERK RECORDS OFFICE RECORDING PAGE

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ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this <u>18</u> day of <u>October</u>, 2012 between Owner(s) David Watson, having an office at 2 Legend Court, Smithtown, New York 11787 (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233.

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions: and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71. Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 71-73 Cleveland Avenue, Hamlet of Bay Shore in the Town of Islip, County of Suffolk and State of New York, known and designated on the tax map of the County Clerk of Suffolk as tax map parcel numbers: District: 0500 Section 179.00 Block 04.00 Lot 114, being the same as that property conveyed to Grantor by deed dated May 11, 2006 and recorded in the Suffolk County Clerk's Office in Liber 12452 Page 555. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 0.459 +/- acres, and is hereinafter more fully described in the Land Title Survey dated April 12, 2002 and updated April 10, 2011 prepared by F.C Watson Land Surveyor P.C., which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A: and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the

[6/11]

Environmental Easement Page 1

terms and conditions of BCA Index Number: W1-1041-05-01, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in. on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement")

1. <u>Purposes</u>. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. <u>Institutional and Engineering Controls</u>. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP.

(4) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(5) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP:

(6) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP:

(7) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP.

(8) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP.

(9) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

Environmental Easement Page 2

[6/11]

B. The Controlled Property shall not be used for Residential, Restricted Residential or Commercial purposes as defined in 6NYCRR 375-1.8(g)(i), (ii) and (iii), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section Division of Environmental Remediation NYSDEC 625 Broadway Albany, New York 12233 Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall annually, or such time as NYSDEC may allow. submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require. that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

[6/11]

Environmental Easement Page 3

the institutional controls and/or engineering controls employed at such site:
 (i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved b the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5 the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. <u>Right to Enter and Inspect.</u> Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. <u>Reserved Grantor's Rights</u>. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement:

5. <u>Enforcement</u>

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603. against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law: it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or [6/11]

Environmental Easement Page 4

suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. <u>Notice</u>. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: C152196 Office of General Counsel NYSDEC 625 Broadway Albany New York 12233-5500

With a copy to:	Site Control Section	
	Division of Environmental Remediation	1
	NYSDEC	
	625 Broadway	
	Albany, NY 12233	

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. <u>Recordation</u>. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. <u>Amendment</u>. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. <u>Extinguishment.</u> This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property

[6/11]

County: Suffolk

Law.

10. <u>Joint Obligation</u>. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

Grantor: David Watson

By: Owner

Print Name: DAVED WATSON

Date: 9/24/12 Title:

Grantor's Acknowledgment

STATE OF NEW YORK)) ss: COUNTY OF ۲ (مراجعه ال

On the $\underline{U4^{15}}$ day of $\underline{S47}$, in the year $20/\underline{1}$, before me, the undersigned, personally appeared $\underline{D4v59}$ wAr50 \underline{N} , personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person-upon behalf of which the individual(s) acted, executed the instrument.

Public - State of New York Notar

ROGER B. ROTHMAN NOTARY PUBLIC, State of NY No. 4946696, Suffolk Cty. Comm. Expires Feb. 6, 20

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner.

By:

Robert W. Schick, Director Division of Environmental Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)) ss: COUNTY OF ALBANY)

On the day of da

Nota York ế of

David J. Chiusano Notary Public, State of New York No. 01CH5032146 Qualified in Schenectady County Commission Expires August 22, 20

SCHEDULE "A" PROPERTY DESCRIPTION

Property Address: 71-73 Cleveland Avenue, Hamlet of Bay Shore, T/O Islip, County of Suffolk, State of New York Tax Map Number: District: 0500 Section: 179.00 Block 04.00 Lot: 114.000

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in, Brentwood, in the Town of Islip. County of Suffolk and Sate of New York, known and designated as Lots 39 and 44 both inclusive and parts of lots 37, 38, 45, and 46 in Block 122 on a certain map entitled. "Map of Edgewood Property of Metropolitan Investment Company, Numbers 1 and 2", filed in the Office of the Clerk of the County of Suffolk on October 5, 1891 as Map Number 120, which said lots and parts of lots when taken together are more particularly bounded and described as follows:

BEGINNING at a point on the Easterly side of Cleveland Avenue, distant 459.50 feet Southerly from the corner formed by the intersection of the Southerly side of South Second Street with the Easterly side of Cleveland Avenue, as said streets are laid out and shown on the above map:

RUNNING THENCE South 88 degrees 58 minutes 10 seconds East 200 feet;

THENCE South 1 degree 01 minutes 50 seconds West, 100 feet;

THENCE North 88 degrees 58 minutes 10 seconds West, 200 feet to the Easterly side of Cleveland Avenue;

THENCE North 1 degree 01 minutes 50 seconds East along the Easterly side of Cleveland Avenue, 100 feet to the point or place of BEGINNING.



EXHIBIT B 10F6

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A B HORE iees conveyed to ad Mäy 11, Clerk's Office in					Π	Exhibith bofb MADISC (60' WIDE
631 595-1862 S.C.T.M. 0500-179-04- SURVEYED4-12-2 UPDATED 4-10-20	PREPARED FOR: Diamond Auto Service C/O David Wats 71 Cleveland Av Bay Shore, N.Y.		1 1 2			ADA ANDONMEN ⁻ 23
114 SIZE FSCM NO. FSCM NO. DWG NO. 002 SCALE 1" - 20" DWG NO. SHEET 1 OF 1	F.C. Watson Land Surveyor P.C. P.O. Box 178 Brightwaters, N.Y. 11718 631 328-3422 ph 631 677 7000	THENCE NORTH 01 DEGREES 01 MINUTES 50 SECONDS EAST, 00.00 FEET ALONG THE EASTERLY SIDE OF CLEVELAND VENUE TO THE PLACE OR POINT OF BEGINNING. OT AREA = 20,000 SQ. FT.	00.00 FEET; HENCE NORTH 88 DEGREES 58 MINUTES 10 SECONDS WEST, 00.00 FEET;	SOUTH 88 DEGREES 58 MINUTES 10 SECONDS EAST 200.00 THENCE SOUTH 01 DEGREES OF A DEG	BEGINNING AT A POINT ON THE EASTERLY SIDE OF CLEVELAND AVENUE, DISTANCE OF 459.50 FEET SOUTHERLY FROM THE CORNER FORMED BY THE INTERSECTION OF THE SOUTHERLY SIDE OF SOUTH SECOND STREET WITH THE EASTERLY SIDE OF CLEVELAND AVENUE, AS SAID STREETS ARE LAID OUT AND SHOWN ON THE ABOVE MAP: THENCE:	OF ISLIP, COUNTY OF SUFFOLK AND STATE OF NEW YORK, KNOWN AND DESIGNATED AS LOTS 39 TO 44 BOTH INCLUSIVE AND PARTS OF LOTS 37, 38, 45 AND 46 IN BLOCK 122 ON A CERTAIN MAP ENTITLED "MAP OF EDGEWOOD PROPERTY OF FILED IN THE OFFICE OF THE CLERK OF THE COUNTY OF SUFFOLK ON OCTOBER 5, 1891 AS MAP NUMBER 120, WHICH MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS :

APPENDIX D

NYSDEC APPROVAL LETTERS AND SSDS DESIGN DOCUMENTS

New York State Department of Environmental Conservation Division of Environmental Remediation Remedial Bureau A, 12th Floor 625 Broadway, Albany, New York 12233-7015 Phone: (518) 402-9625 • Fax: (518) 402-9627 Website: www.dec.ny.gov



January 04, 2013

Diamond Auto Service, Inc. Attn: Mr. David Watson 71-73 Cleveland Street Bayshore, NY 11706

Re: Diamond Auto Service, Inc. Bayshore, Suffolk Coumty Site ID No. C152196 Remedial Work Plan & Decision Document

Dear Mr. Watson:

The New York State Department of Environmental Conservation (the Department) and the New York State Department of Health (NYSDOH) have reviewed the Remedial Work Plan (RWP) for the Diamond Auto Service site dated November 15, 2012, and prepared by J. R Holzmacher P.E., LLC on behalf of Diamond Auto Service. The RAWP is hereby approved. Please ensure that a copy of the approved RAWP is placed in the document repositories. The draft plan should be removed.

Enclosed is a copy of the Department's Decision Document for the site. The remedy is to be implemented in accordance with this Decision Document. Please ensure that a copy of the Decision Document is placed in the document repositories.

Please contact the Department's Project Manager, John Sheehan, at 631-444-0244 or jcsheeha@gw.dec.state.ny.us, at your earliest convenience to discuss next steps. Please recall the Department requires five days notice prior to the start of field work.

Sincerely,

Jab Hirt

James B. Harrington, P.E. Director Remedial Bureau A Division of Environmental Remediation

Enclosure

ec w/attachments:

R. Schick G. Bobersky W. Parish J. Sheehan C. Bethoney, NYSDOH R. Ockerby, NYSDOH J. DeMartinis, J. R. Holzmacher New York State Department of Environmental Conservation Division of Environmental Remediation, Region One Stony Brook University 50 Circle Road, Stony Brook, New York 11790-3409 Phone: (631) 444-0240 • Fax: (631) 444-0248 Website: www.dec.ny.gov



July 9, 2013

J.R. Holzmacher, P.E. Principal J.R. Holzmacher, P.E., LLC 300 Wheeler Road, Suite 402 Hauppauge, NY 11788-4300

> Re: Diamond Auto Service, Inc. 71-73 Cleveland Avenue Bayshore, New York Index #: W1-1041-05-01 / Site #: C152196 SSDS Design Document - Final

Dear Mr. Holzmacher:

The New York State Department of Environmental Conservation (the Department), is in receipt of the above referenced document dated June 27, 2013. The document was revised to address the Department's comments that were outline in our letter to you dated May 10, 2013.

The Department has completed its review of the revised plan and has deemed the Design Document acceptable and thus approved. At this time, please begin the implementation of the plan. The Department requests that it is notified five (5) days in advance of the work associated with the Sub-Slab Depressurization System (SSDS) upgrades so a representative from the Department can be present to observe the activities. Implementation of the plan is to begin within thirty (30) days from receipt of this letter. Should you have any questions, please feel free to contact me at (631)-444-0244 or via email jcsheeha@gw.dec.state.ny.us.

Sincerely,

John C. Shuha

John C. Sheehan Project Manager

ec: J. Harrington, NYSDEC W. Parish, NYSDEC R. Ockerby, NYSDOH J. DeMartinis, J.R. Holzmacher

J.R. Holzmacher P.E., LLC

3555 Veterans Memorial Highway, Suite A, Ronkonkoma, New York 11779-7636 Tel: (631) 234-2220 Fax: (631) 234-2221 e-mail: info@holzmacher.com

June 27, 2013

Mr. John Sheehan NYSDEC – Region 1 SUNY @ Stony Brook 50 Circle Road Stony Brook, NY 11790-3409

> Re: Diamond Auto Service, Inc 71-73 Cleveland Avenue Bay Shore, New York Index # W1-1041-05-01 Site # C152196 SSDS System Design Document - Final

Dear Mr. Sheehan:

We have prepared the following Sub Slab Depressurization System (SSDS) Design Document in response to the request from your office in an email dated January 15, 2013 and the additional comments transmitted February 14, 2013, May 10, 2013 and June 27, 2013.

Background

An existing passive SSDS was constructed in response to sub slab vapor detections during 2007/2008 and has been in operation at this site since prior to 2009. While there have been no significant detections of groundwater contamination in the on-site monitoring wells within the last ten years, the current modifications to the system are being performed in an effort to mitigate the elevated levels of Volatile Organic Compounds (VOCs) detected in the soil vapor beneath the building's slab.

Figure 1 indicates the site location and Figure 2 depicts the building and floor plan configuration indicating the location of the existing SSDS. The current SSDS consists of two four-inch diameter slotted PVC pipes installed vertically, open from the base of the slab to five feet below grade (groundwater at the time). The two vertical vapor collection points work in conjunction with a 20 foot length of four- inch diameter perforated High Density Polyethylene (HDPE) pipe set three feet below finished grade in a bed of gravel. This four-inch pipe is installed horizontally just outside the exterior of the building, parallel to, and two feet from, the east wall. The slotted subsurface pipes were connected together using 2-inch diameter non perforated PVC pipe. This piping was installed to convey collected sub slab gas out through the exterior wall, then vertically above the roof line terminating at a turbine fan for discharge to atmosphere.

Proposed Active SSDS Components

The proposed modifications to the passive SSDS required to have it perform as an active SSDS are indicated on Figure 3. The components to be installed are as follows:

1. A cut-in to the existing 2-inch PVC piping at the vertical run along the exterior wall to install two 90-degree bends, run two 2-inch PVC pipes through the wall, and connect to a new blower/vacuum motor on the interior east wall of the building. Power switches to meet the requirements of the National Electric Code will be installed and will tie in to the existing power distribution panel with a dedicated circuit breaker for the blower/vacuum motor. Installation of new audible and visual alarm components to indicate system status conditions will also be installed on the interior east wall.

The manufacturer specifications for the new Fuji regenerative blower are as follows;

Item	Regenerative Blower
Inlet/Outlet (In.)	1-1/4 (F)NPT
HP	0.56
Voltage	200-230/460
Phase	3
Full Load Amps	1.7/.85
Max. Pressure (in WC)	50
Open Flow Positive Pressure (CFM)	56
Max. Vacuum H20 (In. WC)	45
Min. CFM	17
SCFM @ 10 Pressure In./Water	51
SCFM @ 10 Vacuum In./Water	49
Max. Ambient Temp. (F)	104
Base Material	Aluminum Alloy
Housing	Aluminum Alloy
Impeller Material	Aluminum Alloy
Shaft Seal	Dustproof, Protects Bearings from Contaminated Air and Foreign Particles
Overall Length (In.)	10
Overall Height (In.)	10-1/8
Overall Depth (In.)	11-5/8
For Use With	Air and Noncombustible, Noncorrosive, Nonexplosive Gases
Standard	Class B NEMA Insulation

- 2. Existing exterior piping will have three new manually operated PVC ball valves installed above grade to allow isolation of each soil vapor extraction point.
- 3. Three new PVC sample ports with PVC ball valves for shut-offs will be installed above grade in each independent vapor extraction line before they join to one. In addition one new PVC sample port with a PVC ball valve for shut off will be

installed after the blower discharge to allow periodic collection of air samples. These sample ports are shown on Figure 3.

4. Three new vacuum gauges with manual read faces will be installed in each independent vapor extraction line above grade before they join to one.

Basis of SSDS Design

The purpose of the original passive SSD system was to reduce the likelihood of airborne contaminants entering the building, which remains in active use.

During 2007 and early 2008 measurable VOC concentrations were detected within the work shop and also below the floor slab. It is believed that the elevated vapor contaminant concentrations beneath the slab had built up over the years and were residual in nature. It is also suspected that the VOC detections in the work shop area arose, at least in part, to use of brake cleaning fluid that contained perchloroethene (PCE). This cleaner has since been replaced with one that does not contain PCE. In addition the floor slab was sealed as a precautionary measure.

The goal of the SSDS design is to establish a partial vacuum underneath the floor slab to prevent migration of contaminant laden vapors into the occupied work shop space, rather than to exert a capture zone outward to a particular radius. Effectively, the goal is to make sure that air will leak from the work space down into the sub slab rather than the other way around. Verification of the establishment of this partial vacuum will be achieved through field measurements of the actual vacuum induced as well as observed increases in water levels within the four on-site monitoring wells.

The blower / vacuum pump was selected as a typical size for a medium sized building slab and is believed to be more than twice as large as the minimum acceptable size to achieve the stated goals.

Performance Evaluation

Once the SSDS modifications have been completed each component of the new active system will be tested to verify performance. The main performance parameters relate to the air flow rate and vacuum gauge readings associated with operation of the regenerative blower / vacuum pump.

Air flow rate readings will be accomplished using a pitot tube inserted into one side of the blower exhaust tee while the other side is blocked. The air flow measurements and vacuum gauge readings will be collected with the blower running with all three soil vapor extraction (SVE) screens open, with each screen individually, and with three combinations of two of the three SVE points open as follows:

SVE -	SVE -	SVE -	Air Flow	Vac. Gauge (in. w.c.)		
North	Center	South	(CFM)			
				North	Center	South
open	closed	closed				
closed	open	closed				
closed	closed	open				
open	open	closed				
open	closed	open				
closed	open	open				
open	open	open				
closed	closed	closed				
open	open	open	Blower off			

The air flow readings will be collected only during the initial test to establish a correlation between flow rate and the vacuum gauge readings. Thereafter, only the vacuum gauge readings will be collected during routine system monitoring.

The system design is based on establishing an "area of influence" in which the blower / vacuum pump will capture any fugitive vapors. Startup testing activities are intended to verify the operating parameters of the blower / vacuum pump and the extent of the area of influence, which is a function of the soils in the vicinity of the SVE points.

The purpose of the SSDS system in this case is not to capture a defined area of some identified area of contamination but rather to exert a vacuum beneath the slab of the entire eastern side of the building. Startup of the blower / vacuum pump will be augmented with field measurements of water levels within the four existing monitoring wells. If a partial vacuum can be induced at the monitoring wells a small but measureable increase in water levels will be seen.

While it is not required to establish a partial vacuum at the wells located east of the building, confirmation of such a vacuum will demonstrate that the blower / vacuum pump is more than adequately sized to induce a partial vacuum beneath the slab. The monitoring wells will be used for convenience as existing measuring points that can be easily accessed.

After the SSDS system modifications are completed, the vacuum gauge and air flow readings tabulated above will be collected, water levels will be measured and then the blower will be left off for a period of one week. Water levels in each of the four monitoring wells will be measured prior to restarting the blower and also one hour, four hours, one day and seven days following placing the blower back into operation.

This information will be analyzed to predict vacuum gauge readings below which sub slab depressurization is no longer achieved. These readings will be used as the minimum performance threshold for operation of the blower / vacuum pump. Once routine operation of the system is achieved the final component of post construction system evaluation will include a final round of indoor and outdoor air sampling.

Following verification of system operation and mechanical effectiveness, an analysis of any contaminants contained in the blower / vacuum pump discharge will be performed. This analysis will include a mass balance and the airflow dilution models contained in the DAR-1 software program. The DAR-1 results will determine if the SSDS discharge airflow needs to be treated prior to discharge.

SSDS Shut Down Procedures

The NYSDEC will be kept apprised of all activities related to the SSDS as part of the Site Management Plan.

The SSDS will remain operational until it is no longer necessary to address current or potential exposures. This will be determined by periodic air sampling and communications with the NYSDEC.

Operation of the active SSDS is expected to rapidly remove any residual contaminated vapor that may exist below the building floor slab. Routine monitoring will be performed using a Photo Ionization Detector (PID) to perform field screening within the building interior, the exterior areas and of the blower / vacuum pump discharge.

After one year of operation as an active SSDS, air samples will be collected from the system (pre-treatment) as well as in indoor air. Indoor air samples will be collected over an eight hour period to simulate the exposure scenario for a work place with a single shift. All samples will be analyzed by EPA Method TO-15. Based on this data the system components may be adjusted. PID readings would continue on a monthly basis until no contaminants are detectable or up to one year.

Thereafter PID monitoring will be performed monthly until no contaminants are detected for three consecutive months. Once this occurs the system will be turned off for a period of one week, and then restarted with PID sampling repeated immediately thereafter. If no "rebound" is detected then the system will remain off until the end of the month, then retested.

The SSDS will not be shut down unless approved in advance by the NYSDEC. It is understood that the NYSDEC will likely require air sampling to support shutdown. The Volunteer will provide a shutdown plan to the NYSDEC proposing air testing locations and frequencies. The Volunteer will await NYSDEC review and approval before taking any action.

Please call if you have any questions or would like to further discuss this project.



Sincerely, J.R. HOLZMACHER, PE LLC

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J. Robert Holzmacher P.E. Principal

CC Dave Watson, Diamond Auto Service, Inc. Ken Watson, Clear View Environmental Figures



J.R. HOLZMACHER P.E., LLC The Third Generation of Excellence	LOCATION MAP	dwn: AJZ	SCALE: $1'' = 100'$	date: 1-18-13	PROJECT NO.: Diamo 11-01
In Water Supply, Water Resources, Civil and Environmental Engineering 3555 VETERANS MEMORIAL HIGHWAY,	Water Supply, Water Resources, DIAMOND AUTO SERVICE, INC. and Environmental Engineering 71-73 CLEVELAND AVENUE VETERANS MEMORIAL HIGHWAY, 71-73 CLEVELAND AVENUE	chkd: JMD	APPD: JMD	REV.:	NOTES:
SUITE A, RONKONKOMA, NY 11779 PHONE # (631) 234-2220 FAX # (631) 234-2221 E-MAIL: info@holzmacher.com	BAY SHORE, NEW YORK	FIGURE NO.: 1			



