### Sidney, New York Area Soil Vapor Intrusion Program Summary Report







August 4, 2006

Allan Geisendorfer, P.E.
New York State Department of Environmental Conservation
Division of Hazardous Waste Remediation
1150 N. Westcott Road
Schenectady, New York 12306-2014

Re: Soil Vapor Intrusion Program

Sidney, NY

Dear Mr. Geisendorfer:

Enclosed please find the data summary report for the Sidney, New York area SVI program requested by NYSDEC. Should you have any questions, please do not hesitate to contact us.

Respectfully yours, JTM Associates, LLC

James T. Mickam, P.G.

President

Cc: J Bianchi – Amphenol

S Waldo – Amphenol

R Galloway – Honeywell

D Lightsey - NYSDEC

T Girard - NYSDOH

Sidney, New York Area Soil Vapor Intrusion Program Summary Report

Prepared for

Amphenol Corporation and Honeywell International

JTM ASSOCIATES, LLC Liverpool, New York

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#### **Executive summary**

Amphenol Corporation and Honeywell International completed a program to evaluate if the soil vapor intrusion (SVI) exposure pathway has the potential to exist due to concentrations of Trichloroethene (TCE) in shallow ground water. The detected TCE was historically used as a degreasing chemical at the facility in Sidney, New York currently owned and operated by Amphenol. The New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) have been active in providing guidance, and reviewing and approving the work scope of the program.

The SVI program included the development of work plans for the different steps of the investigation. The work plans also defined conservative, health risk protective responses to possible concentrations of TCE in the soil vapor consistent with NYSDOH guidance. Samples of shallow ground water and soil vapor were collected during the program to identify if TCE in the ground water was partitioning to the soil vapor. Soil vapor samples were also collected from directly beneath the basement floor (termed a *sub-slab* sample) at 51 residential dwellings to assess TCE vapor concentrations beneath the homes.

The concentration of TCE was equal to or exceeded the NYSDEC and NYSDOH approved action level below the basement at 10 of the 51 buildings sampled. In response to this discovery, soil vapor mitigation systems have been installed and operated at seven buildings. Discussions with the three remaining building owners regarding the recommended installation of a vapor mitigation system are ongoing as of mid-July 2006.

#### Section 1 – Introduction

#### 1.1 - Background

Amphenol Corporation owns and operates an electrical connector manufacturing facility in Sidney, New York. Figure 1 illustrates the site's location. The plant produces electrical connectors for the civilian and military aerospace industry markets. Amphenol purchased the plant from The Bendix Connector Group of Allied-Signal, Inc. (now Honeywell International) in 1987. Bendix had purchased the plant from Scintilla in 1929. The site has been used for manufacturing since the early 1900s.

Prior to Amphenol controlling the facility, historic operations had affected the chemistry of the shallow ground water at the site. This has resulted in various volatile organic compounds (VOCs), primarily TCE and its associated degradation species, being detected in the ground water at the plant and hydraulically downgradient from the facility.

Consistent with two Administrative Consent Order agreements between Amphenol and the NYSDEC, Amphenol and Honeywell have completed characterizations of the nature and extent of the VOCs in the ground water both on and off the site. These investigations led to the design, construction and operation of two independent ground water collection and treatment systems at the facility. These systems are referred to as the West Well and Boiler Room ground water remedial systems both of which continue to operate. Figure 2 depicts the Amphenol facility, locations of the West Well and Boiler Room remedial systems and the surrounding area.

In August 2004, Amphenol and Honeywell met with representatives of the NYSDEC and NYSDOH to discuss the agencies' new initiative to re-evaluate sites already under remedial action for TCE impacts. The purpose of the re-evaluation is to assess if the soil vapor intrusion (SVI) exposure pathway is complete at a given site. The SVI pathway is the process whereby VOCs in ground water beneath buildings have the potential to affect

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the chemistry of the indoor air. Following the meeting, Amphenol and Honeywell agreed to evaluate this potential exposure pathway. If the SVI pathway was found to pose an unacceptable health risk, appropriate measures would be taken to mitigate the potential exposure. This document provides a summary of program and the data collected to date.

#### 1.2 - Purpose and scope of the SVI program

Environmental evaluations typically involve a step-wise process where each succeeding effort is based on and directed by previously collected data. The purpose of this evaluation was to assess if the SVI process has the potential to affect the chemistry of indoor air from VOCs in shallow ground water that emanate from the Amphenol facility. To accomplish this purpose, a three step program involving several tasks was defined. The various steps and their associated work scopes included:

#### Step 1 – Characterization of ground water and soil vapor chemistry

- Additional and more detailed characterization of ground water chemistry hydraulically downgradient of the West Well and Boiler Room remedial systems
- Characterization of soil vapor chemistry
- Identification of other, non-Amphenol, sources of TCE to the ground water in the area hydraulically downgradient from the facility that could be SVI sources

#### Step 2 – Evaluate potential functionality of the SVI pathway

- Characterization of the soil vapor chemistry beneath the foundation slab of selected buildings
- Sample and analyze indoor air if requested by the parties where sub-slab samples were planned

#### Step 3 – Mitigation system construction

- Inspect buildings that are candidates for vapor mitigation systems
- Construct and initiate operation of mitigation systems
- Periodically inspect and maintain mitigation systems

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#### Section 2 - Summary and chronology of SVI program

Table 1 provides a general chronological summary of the SVI program. The specific work activities are described below.

#### 2.1 – Discussions with regulatory agencies during program

Throughout the entire SVI program, the Amphenol / Honeywell team and the regulatory agencies, including NYSDEC and NYSDOH, have worked closely to define an appropriate scope of investigation, reach consensus on the interpretation of data and coordinate actions in response to the environmental conditions revealed by the assessments. The forums for discussions with the agencies typically included face to face meetings and conference calls. When the dynamics of the program required frequent communication, telephone calls and e-mail between individuals of the respective teams was utilized.

#### 2.2 - Soil vapor and ground water chemistry screening

Several phases of investigations to characterize the local hydrogeology and ground water chemistry have been completed in support of the West Well and Boiler Room remediation projects. These available data were supplemented by completing ground water and soil vapor screening throughout the area of interest. Screening was accomplished by sampling the first encountered ground water and unsaturated zone soil vapor at several locations to better define the chemistry of the shallow ground water and soil vapor spatially.

#### 2.2.1 - Screening work plan

A work plan describing the proposed ground water and soil vapor screening effort was prepared and submitted to the agencies for review, comment and approval.

The work plan defined ground water and soil vapor sampling locations and collection protocols. The NYSDEC and NYSDOH approved the work plan following incorporation of their comments.

#### 2.2.2 – Data collection

Ground water screening samples were collected at 24 locations. Soil vapor screening samples were collected at 36 locations hydraulically. Figure 3 illustrates screening sample locations. Table 2 summarizes ground water and soil vapor screening probe installation information.

Shallow ground water was characterized by collecting samples from temporary observation wells which were positioned in road right-of-ways or paved parking lots except for GWP-24 (Figure 3). The temporary wells were installed using direct push technology to a depth just below the depth of the water table observed during borehole completion. They are constructed of one-inch diameter PVC casing attached to 2-foot length of slotted PVC screen. A silica sand pack was installed around the well screen to minimize sample turbidity. The annular space between the casing and borehole was sealed with bentonite from the sand pack to the surface. A protective, flush mount curb box was installed to complete the construction.

Following their installation and a minimum 48 hour equilibration period, the temporary observation wells were sampled using low flow sampling methods as described in the Compendium of ERT Ground Water Sampling Procedures (USEPA – OSWER 9360.4-06). Samples were be analyzed for volatile organic compounds (VOCs) using EPA Methods 601 and 602, consistent with the ongoing West Well and Boiler Room site monitoring programs applying Category 1 quality assurance / quality control criteria. Samples were collected and analyzed by Adirondack Environmental of Albany, NY.

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Soil vapor sample collection was accomplished by installing a Geoprobe Systems<sup>™</sup> Model # AT8617S soil gas sampling implant attached to 3/16" Teflon tubing, using direct push methods. All sampling locations, except SVP-24 (figure 2) were installed directly through paved surfaces in local roads and parking lots. The majority of soil vapor probes (SVPs) were installed in separate boreholes and directly adjacent to ground water sampling probes or an existing monitoring well. SVP-27 through SVP-36 were not located next to a ground water sampling point but between other SVPs to increase the sampling grid special density. All SVPs were vertically positioned approximately 8 feet below the ground surface or approximately 2 feet above the depth of ground water observed during the ground water probe installation, whichever was shallower. The eight foot depth or shallower was recommended by NYSDOH as being approximately equivalent to the depth of most basement floors. The borehole created by the probe installation process was backfilled with glass beads to a height of approximately 1 foot above the implant and bentonite to the surface to prevent atmospheric air from entering the implant. A protective, flush mount curb box will be installed to complete the construction.

Following a minimum 48-hour equilibration period and purging of the sample tubing, soil vapor samples were be collected using a 1-liter vacuum canister regulated to sample continuously for a period of one hour. Soil vapor samples were collected prior to ground water sample collection. To demonstrate that short circuiting of ambient air through the borehole was not occurring during soil vapor sampling, a helium gas envelop was established around the sample probe at the surface. The presence of helium was then monitored during the probe purging and immediately subsequent to sample collection to assure short circuiting was not occurring. Ambient air samples were also occasionally collected during SVP sampling events at selected locations.

Soil vapor samples were analyzed for those parameters included in USEPA Method T0-15 to a detection limit concentration of not greater than 5 micrograms

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per cubic meter (µg/M³). All samples were collected and analyzed by Centek Laboratories, LLC of Syracuse, NY. Soil vapor analytical data were validated consistent with the guidance provide by USEPA Region II SOP HW-18 by Data Validation Services. At selected locations, a second round of soil vapor screening samples were collected to confirm earlier results and assess temporal variability.

#### 2.2.3 – Data summary

The concentration of TCE, the primary analyte of interest, observed in ground water and soil vapor is summarized in Table 3. Figure 4 presents the TCE concentration for both ground water and soil vapor screening samples by location. Appendix A provides the laboratory reports for ground water and soil vapor screening samples and data validation reports for soil vapor samples.

#### 2.3 - Sub-slab vapor sampling

Following completion of the ground water and soil vapor chemistry characterization step of the SVI program, discussions with the regulatory agencies were held to review the screening data and define the next step in the program. As a result of the discussions, it was agreed that sampling of the vapor directly beneath the foundation floor (referred to as a *sub-slab sample*) was the next appropriate step.

#### 2.3.1 – Sub-slab vapor sampling work plan

A sub-slab vapor sampling work plan was prepared and submitted to the NYSDEC and NYSDOH for review and approval in early March 2005. The work plan defined the purpose and scope of the proposed sub-slab sampling program. Sampling would be completed in two phases and would begin near the plant (Phase 1). Phase 2 would include sampling at greater distances from the facility, if appropriate. Sample collection protocols were also included in the work plan.

The work plan defined a course of action depending on the concentration of two analytes, TCE and PCE. If the concentration of TCE in the sub-slab vapor was equal to or greater than 5  $\mu g/M^3$ , then a vapor mitigation system would be recommended to the owner of that building. The action level for PCE was established at equal to or greater than 100  $\mu g/M^3$ . These action levels are the most conservative concentrations used in the decision matrix of the NYSDOH draft guidance document. Furthermore, attenuation provided by the basement floor slab (which current literature suggest can reduce the concentration up to 100 times) was not considered in determining the action levels thus adding additional conservatism to health protection.

In addition to sub-slab samples, if the owner of a building proposed for sub-slab sampling requested indoor air sampling, it would be completed. The agencies subsequently approved the work plan and sub-slab sampling began the end of March 2005.

#### 2.3.2 - Sub-slab vapor sampling

Sub-slab vapor samples were collected at the selected locations by advancing a nominal 3/8 inch hole through the basement floor slab to a depth of approximately 6 inches below the slab base. A 3/8 inch O.D. polyethylene tubing was inserted in the hole through the floor and sealed with natural bees wax. The tubing was then connected to a one liter sample container and a preset Entech™ regulator calibrated to allow a one liter sample to be collected over a 24 hour period (a constant flow rate of approximately 0.007 liter/minute). After sample collection the tubing was removed and the hole in the floor filled with premixed rapid curing concrete.

Three different sub-slab sampling events have occurred since March 2005 as described below.

#### • 2005 Phase 1

Figure 5 illustrates the locations where sub-slab samples were collected during 2005. Phase 1 sampling was conducted between March 25 and April 7, 2005. It was designed to assess the functionality of the soil vapor intrusion pathway near to the Amphenol facility and to this end included sampling at the occupied buildings along Railroad Avenue and the south side of Oak Street.

#### • 2005 Phase 2

The Phase 2 sub-slab sampling was conducted between May 16 and June 14, 2005. Phase 2 sample locations (Figure 5) were selected based on the results of the Phase 1 results with input from and concurrence with NYSDEC and NYSDOH.

#### • 2006 Monitoring

Between January 23 and March 22, 2006, sub-slab vapor monitoring (the sampling of selected, previously sampled locations) was conducted. Figure 6 depicts the locations sampled during the 2006 monitoring effort. This included approximately one-half of the locations previously sampled as described in Phase 1 and 2 in 2005. Six locations not included in either Phase 1 or 2 were also sampled at the request of the agencies.

#### 2.3.3 – Sub-slab data summary

Tables 4, 5 and 6 provide summaries of TCE and PCE concentrations sub-slab samples for the Phase 1, Phase 2 and 2006 monitoring sampling events, respectively. Laboratory and the associated data validation reports are provided in Appendix B. In the interest of maintaining the confidentiality of owners of a given building, only the laboratory sample ID number is provided with the results.

#### 2.4 - Building owner requested indoor air sampling

The sub-slab sampling work plan provided for indoor air sampling if requested by the building owner of tenant. Indoor air samples were requested at three locations. The sample results for TCE and PCE are provided in Table 7. Appendix B contains the indoor air sample laboratory and data validation reports.

#### 2.5 – Mitigation systems

#### 2.5.1 – Mitigation system installation

The Phase 1 and 2 sub-slab sampling identified seven locations where the concentration of TCE was at or above the action level defined in the work plan. Consequently, the installation of soil vapor mitigation systems at these locations was recommended. The owners of the seven buildings concurred with the recommendation and agreed to the mitigation system installation.

The soil vapor mitigation systems were constructed consistent with the requirements of the NYSDOH draft guidance document and as provided for in the United States Environmental Protection Agency specification for the installation of radon mitigation systems (EPA 402-R-93-78; revised April 1994). Installation was completed by a licensed radon system contractor between July and October 2005. A construction report for each mitigation system has been previously provided to the agencies.

Based on the results of the 2006 monitoring data, mitigation systems have been recommended at three additional locations. Discussions with the owners of these locations are ongoing and we expect that mitigations systems will be installed before the 2006-07 heating season begins (November 2006).

#### 2.5.2 - Mitigation system operation and maintenance

Operation and maintenance of the mitigation systems is provided by Amphenol and Honeywell. This includes quarterly inspection of the systems for the first year of operation and annually thereafter. On call maintenance is also available. Building owners are reimbursed the cost of electrical power for system operation.

#### Section 3 - Public Outreach and Involvement

A Public Outreach and Involvement program provided property owners in the study area with timely information about the soil vapor investigation and remediation. Amphenol and Honeywell scheduled public forums and opportunities for community leaders and citizens to ask questions and provide input on the project through personalized, face-to-face communications with property owners, a telephone information line, a public information meeting, and direct access to representatives of Amphenol, Honeywell, the New York State Department of Health (DOH) and the New York State Department of Environmental Conservation (DEC).

Key elements of the Public Outreach and Involvement program were:

- Amphenol representatives delivered information about outdoor and indoor testing to
  property owners and tenants through door-to-door communications before any
  sampling occurred. Hand delivery of information was completed at each stage of the
  investigation.
- Amphenol and Honeywell representatives participated in meetings with the village mayor, engineer, and board members.
- Two public information sessions were held prior to in-home sampling.
- After testing occurred, Amphenol representatives scheduled in-home appointments with both home owners and tenants to provide individual results.
- A public repository of information related to the study was established and updated at two Sidney locations: the Village Clerk Office and the Sidney Memorial Public Library.

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- Amphenol's 24 hour telephone information line received 45 calls from stakeholders seeking information and updates. All calls were returned within 48 hours. Citizens also had access to DOH's toll-free telephone information line.
- Throughout the 18-month Public Outreach and Involvement program, property owners, tenants and community leaders received accurate information on the project quickly and efficiently from Amphenol and Honeywell. And through the combined efforts of the companies and DEC and DOH, the investigation and remediation were completed in a manner that was sensitive to the community and property owners and protective of public health and the environment.

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#### Table 1 SVI Program Summary and Chronology Sidney, New York

| Activity  | Scope of Activity   | Period of Activity                                  |
|---|---|---|
| Agency discussions  |   |   |
| - Initial meeting regarding SVI initiative                        | - Discuss NYSDEC / NYSDOH program to assess SVI pathway at TCE sites  | - July 2004   |
| - Meeting regarding soil vapor and ground water                   | - Meet with Agencies to review soil vapor and ground water  | - February 2005                                     |
| characterization work task  | characterization data and define work scope for additional efforts  |   |
| - Discussions to review sub-slab sampling work plan               | - Conference calls to receive and incorporate agency comments on sub-slab work plan                                   | - March 2005  |
| - Phase 1 sub-slab data review                                    | - Conference calls to review Phase 1 sub-slab data and select Phase 2 sample locations                                | - Mid-May 2005                                      |
| - Phase 2 sub-slab data review                                    | - Conference call to review Phase 2 sub-slab data and identify candidate buildings for mitigation system installation | - Mid June 2005                                     |
| - 2006 sub-slab monitoring  | - Meeting and follow-up conference call to review proposed 2006 sub-slab monitoring program                           | - January 2006                                      |
| - 2006 monitoring data review                                     | - Conference call to review 2006 monitoring data  | - May 2006  |
| • Soil vapor and ground water characterization                    |   |   |
| - Work plan development   | - Prepare soil vapor and ground water screening work plan for agency review and approval                              | - November 2004                                     |
| - Soil vapor and ground water characterization field program      | - Install soil vapor and ground water sampling probes   | - December 2004                                     |
| - Soil vapor and ground water characterization laboratory program | - Sample an analyze soil vapor and ground water probes  | - January 2005                                      |
| - Data reduction and interpretation                               | - Prepare data summary tables and distribution maps   | - February 2005                                     |
| Sub-slab vapor sampling   |   |   |
| - Work plan development   | - Prepare sub-slab vapor sampling work plan for agency review and approval  | - March 2005  |
| - Phase 1 sub-slab sampling                                       | - Collect and analyze Phase 1 sub-slab vapor samples; complete data validation  | - Mid March - April 2005<br>- Early to mid-May 2005 |
| - Phase 1 data review   | - Reduce and interpret Phase 1 sub-slab data; Select Phase 2 sampling   |   |
|   | locations; Communicate Phase 1 results to building owners and tenants   | - Mid-May to mid-June<br>2005                       |

#### Table 1 SVI Program Summary and Chronology Sidney, New York

| Activity                             | Scope of Activity   | Period of Activity    |
|--------------------------------------|---|-----------------------|
| • Sub-slab vapor sampling (cont.)    |   |                       |
| - Phase 2 sub-slab sample collection | ab sample collection - Collect and analyze Phase 2 sub-slab vapor samples; complete data validation; Re-sample 2 locations - I                          |                       |
| - Phase 2 data review                | - Reduce and interpret Phase 2 sub-slab data; Communicate Phase 2 results to building owners and tenants; Identify mitigation system candidates         | - June 2005           |
| - 2006 Monitoring                    | - Collect and analyze 2006 monitoring sub-slab vapor samples; complete data validation; Re-sample 3 locations   | - January – May 2006  |
| - 2006 Monitoring data review        | - Reduce and interpret 2006 sub-slab monitoring data; Communicate results to building owners and tenants; Identify mitigation system candidates         | - May – June 2006     |
| • Mitigation systems                 |   |                       |
| - Contact building owners            | - Review mitigation system installation process with candidate building owners  | - July 2005           |
| - Install mitigation systems         | - Coordinate and oversee installation and start-up of vapor mitigation systems  | - July – October 2005 |
| - 2006 mitigation systems            | - Recommend 3 additional mitigation systems based on 2006 monitoring data; Review mitigation system installation process with candidate building owners | - June – July 2006    |

Table 2
Sidney Area SVI Program
Ground Water and Soil Vapor Screening Probe Construction Information

| Probe ID         | Surface Elev.  | Depth       | Screen Interval (depth) |
|------------------|----------------|-------------|-------------------------|
| SVP-01           | 984.7          | 8.0         | 7.5 - 8.0               |
| GWP-02           | 982.0          | 14.8        | 4.8 - 14.8              |
| SVP-02           | 982.0          | 6.0         | 5.5 -6.0                |
| GWP-03           | 983.4          | 14.0        | 4.0 - 14.0              |
| SVP-03           | 983.3          | 6.0         | 5.5 - 6.0               |
| GWP-05           | 985.3          | 15.8        | 5.8 - 15.8              |
| SVP-05           | 985.3          | 8.0         | 7.5 - 8.0               |
| GWP-06           | 981.8          | 13.4        | 3.4 - 13.4              |
| SVP-06           | 981.9          | 5.5         | 5.0 - 5.5               |
| GWP-07           | 982.8          | 15.5        | 5.5 - 15.5              |
| SVP-07           | 982.8          | 7.5         | 7.0 - 7.5               |
| GWP-08           | 983.0          | 14.0        | 4.9 - 14.0              |
| SVP-08           | 982.9          | 7.0         | 6.5 - 7.0               |
| GWP-09           | 983.3          | 15.0        | 5.0 - 15.0              |
| SVP-09           | 983.3          | 7.0         | 6.5 - 7.0               |
| GWP-10           | 984.6          | 14.7        | 4.7 - 14.7              |
| SVP-10           | •              |             |                         |
| GWP-11           | 984.7<br>984.2 | 6.0<br>16.0 | 5.5 - 6.0<br>6.0 - 16.0 |
| SVP-11           |                | 8.0         | 7.5 - 8.0               |
| GWP-11           | 984.2          |             |                         |
| SVP-12           | 982.7<br>982.7 | 13.6        | 3.6 - 13.6              |
| GWP-13           |                | 7.0         | 6.5 - 7.0               |
|                  | 983.0          | 15.9        | 10.9 - 15.9             |
| SVP-13<br>GWP-14 | 983.0          | 7.5         | 7.0 - 7.5               |
|                  | 983.0          | 16.0        | 11.0 - 16.0             |
| SVP-14           | 983.0          | 8.0         | 7.5 - 8.0               |
| SVP-15           | 987.5          | 12.0        | 11.5 - 12.0             |
| GWP-16           | 984.2          | 16.7        | 6.7 - 16.7              |
| SVP-16           | 984.2          | 8.0         | 7.5 - 8.0               |
| GWP-17           | 983.9          | 17.2        | 7.2 - 17.2              |
| SVP-17           | 983.9          | 8.0         | 7.5 - 8.0               |
| GWP-18           | 983.0          | 14.8        | 4.8 - 14.8              |
| SVP-18           | 983.0          | 8.0         | 7.5 - 8.0               |
| GWP-19           | 983.1          | 15.9        | 5.9 - 15.9              |
| SVP-19           | 983.1          | 8.0         | 7.5 - 8.0               |
| GWP-20           | 985.4          | 20.4        | 10.4 - 20.4             |
| SVP-20           | 985.4          | 8.0         | 7.5 - 8.0               |
| GWP-21           | 984.5          | 17.6        | 7.6 - 17.6              |
| SVP-21           | 984.5          | 8.0         | 7.5 - 8.0               |
| GWP-22<br>SVP-22 | 985.6          | 17.6        | 7.6 - 17.6              |
| GWP-22           | 985.6          | 8.0         | 7.5 - 8.0               |
| SVP-23           | 982.8          | 17.5        | 7.5 - 17.5<br>7.5 - 8.0 |
| GWP-24           | 982.8          | 8.0<br>16.0 |                         |
| SVP-24           | 980.8          | 16.0<br>7.0 | 6.0 - 16.0<br>6.5 - 7.0 |
| GWP-25           | 980.8          | 17.3        | 7.3 - 17.3              |
| SVP-25           | 983.9          | 8.0         | 7.5 - 8.0               |
| GWP-26           | 983.9<br>985.0 | 15.7        | 5.7 - 15.7              |
| SVP-26           | 985.0<br>985.0 | 6.0         | 5.7 - 15.7<br>5.5 - 6.0 |
| SVP-20           | 984.8          | 6.0         | 5.5 - 6.0               |
| SVP-27           |                |             | 5.0 - 5.5               |
| SVP-20<br>SVP-29 | 982.4          | 5.5         | 5.0 - 5.5<br>5.5 - 6.0  |
|                  | 982.6          | 6.0         |                         |
| SVP-30           | 982.4          | 7.0         | 6.5 - 7.0               |
| SVP-31           | 983.4          | 7.0         | 6.5 - 7.0               |
| SVP-32           | 982.0          | 7.0         | 6.5 - 7.0               |
| SVP-33           | 983.4          | 7.5         | 7.0 - 7.5               |
| SVP-34           | 984.2          | 8.0         | 7.5 - 8.0               |
| SVP-35           | 982.5          | 8.0         | 7.5 - 8.0               |
| <b>SVP</b> -36   | 984.4          | 8.0         | 7.5 - 8.0               |

Table 3
Sidney Area SVI Program
TCE Concentrations in Ground Water and Soil Vapor Screening Samples

| Ground Wat | Ground Water (ppb) |        | Soil Vapor (ug/M3) |         |
|------------|--------------------|--------|--------------------|---------|
| Sample     |                    | Sample | Round 1            | Round 2 |
| WW-4       | <1                 | SVP-01 | 40                 | 3       |
| GWP-02     | 1.2                | SVP-02 | ND                 | 1       |
| GWP-03     | 13.0               | SVP-03 | ND                 | 8       |
| GWP-05     | <1                 | SVP-05 | ND                 |         |
| GWP-06     | <1                 | SVP-06 | ND                 | ND      |
| GWP-07     | 1.0                | SVP-07 | ND                 | 1       |
| GWP-08     | 2.1                | SVP-08 | 39                 | 15      |
| GWP-09     | 29.0               | SVP-09 | 4                  |         |
| GWP-10     | <1                 | SVP-10 | ND                 |         |
| GWP-11     | <1                 | SVP-11 | ND                 |         |
| GWP-12     | <1                 | SVP-12 | 13                 | 4 J     |
| GWP-13     | <1                 | SVP-13 | ND                 | ND      |
| GWP-14     | 1.9                | SVP-14 | 520                | 10      |
| GWP-15     | 34.0               | SVP-15 | 3                  | 4       |
| GWP-16     | 1.9                | SVP-16 | 1                  |         |
| GWP-17     | <1                 | SVP-17 | 2                  |         |
| GWP-18     | <1                 | SVP-18 | 1                  | ND      |
| GWP-19     | <1                 | SVP-19 | ND                 | ND      |
| GWP-20     | 120.0              | SVP-20 | 1]                 |         |
| GWP-21     | 4.5                | SVP-21 | 1                  |         |
| GWP-22     | <1                 | SVP-22 | ND                 |         |
| GWP-23     | <1                 | SVP-23 | ND                 |         |
| GWP-24     | 3.9                | SVP-24 | 13                 |         |
| GWP-25     | <1                 | SVP-25 | ND                 |         |
| GWP-26     | <1                 | SVP-26 | ND                 |         |
|            |                    | SVP-27 | 5                  | 2       |
|            |                    | SVP-28 | 39                 | 19      |
|            |                    | SVP-29 | ND                 | 1       |
|            |                    | SVP-30 | ND                 | 1       |
|            |                    | SVP-31 | 160                |         |
|            |                    | SVP-32 | ND                 | 1 J     |
|            |                    | SVP-33 | ND                 | 1 J     |
|            |                    | SVP-34 | 804 J              | 330     |
|            |                    | SVP-35 | ND                 | ND      |
|            |                    | SVP-36 | ND                 | ND      |

ND = Not Detected

## Table 4 Sidney Area SVI Program Phase 1 Sub-slab Sample TCE and PCE Concentrations

| Lab ID | Sample Date | TCE            | PCE    |
|--------|-------------|----------------|--------|
| 001    | 03/25/05    | 0.44 J         | 1 J    |
| 002    | 03/25/05    | ND             | ND_    |
| 003    | 03/25/05    | 28             | 27     |
| 004    | 03/28/05    | 0. <u>98</u> J | 5.6 J  |
| 005    | 03/28/05    | ND_            | 0.9 J  |
| 006    | 03/28/05    | 22             | 1.1 J  |
| 007    | 03/28/05    | ND             | 2.8 J  |
| 800    | 03/28/05    | ND_            | 1.4 J  |
| 009    | 03/28/05    | ND             | 1.4 J  |
| 010    | 03/29/05    | 9.9 J          | 1.4 J  |
| 011    | 03/29/05    | ND             | ND_    |
| 012    | 03/29/05    | 0.66 J         | 2.5 J  |
| 013    | 03/29/05    | 0.55 J         | 1.8 J  |
| 014    | 03/29/05    | 0.93 J         | 1 J    |
| 015    | 03/30/05    | 1.5            | 2.2    |
| 016    | 03/30/05    | 9.3            | 3.7    |
| 017    | 03/30/05    | 0.87 J         | 1.7 J  |
| 018    | 03/30/05    | 3.3            | 0.97 J |
| 019    | 04/07/05    | 2.1 J          | 7.2 J  |
| 019    | 04/07/05    | 2.1 J          | 7.2 J  |
| 020    | 04/07/05    | 1.9 J          | 2 J    |
| 021    | 04/07/05    | 0.82 J         | 4.3 J  |

#### NOTES:

All TCE and PCE results in ug/M3

J" = Estimated concentration

"ND' = Not detected

### Table 5 Sidney Area SVI Program Phase 2 Sub-slab Sample TCE and PCE Concentrations

| Lab ID      | Sample Date | TCE    | PCE    |
|-------------|-------------|--------|--------|
| 22          | 05/16/05    | 1.30   | 1.10   |
| 23          | 05/16/05    | 2.50   | 0.83   |
| 24          | 05/16/05    | 1.30   | 0.69 J |
| 25          | 05/16/05    | 0.71 J | ND     |
| 26          | 05/17/05    | 1.60   | ND     |
| 27          | 05/17/05    | 1.50   | 0.83 J |
| 30          | 05/17/05    | 0.98   | 0.69 J |
| 31          | 05/17/05    | ND     | ND     |
| 32          | 05/18/05    | 1.10   | 0.69 J |
| 33          | 05/18/05    | 1.90   | 0.76 J |
| 34          | 05/18/05    | 1.10   | ND     |
| 35          | 05/18/05    | 0.87   | ND     |
| 36          | 05/18/05    | 2.90   | ND     |
| 37          | 05/18/05    | 1.10   | 0.76 J |
| 39          | 05/24/05    | 0.87   | ND     |
| 40          | 05/24/05    | 0.66 J | 0.76 J |
| 41          | 05/25/05    | ND     | 0.76 J |
| 48          | 05/31/05    | 3.30   | 1.3 J  |
| 49          | 05/31/05    | 5.7 J  | ND     |
| 50          | 06/01/05    | 2.5 J  | 0.97 J |
| 51          | 06/01/05    | ND     | ND     |
| 52          | 06/14/05    | 14 J   | 4.2 J  |
| 53_         | 06/14/05    | 8.30   | 4.00   |
| 54          | 06/14/05    | 8.90   | 1.60   |
| 55_         | 06/14/05    | 5.9 J  | 1.4 J  |
| 56          | 06/14/05    | 3.8 J  | ND     |
| <u>57</u> * | 09/12/06    | 3.3    | 0.69   |
| 58 **       | 09/13/06    | 3.8    | 1.2    |

NOTES:

All TCE and PCE results in ug/M3

<sup>&</sup>quot;J" = Estimated concentration

<sup>&</sup>quot;ND' = Not detected

<sup>^\* =</sup> Confirmation sample for Lab ID 55

<sup>\*\*\* =</sup> Confirmation sample for Lab ID 49

#### Table 6 Sidney Area SVI Program 2006 Sub-slab Monitoring TCE and PCE Concentrations

| Lab ID | Sample Date       | TCE    | PCE    |
|--------|-------------------|--------|--------|
| 59     | 01/23/06          | 5.20   | 9.90   |
| 60     | 01/23/06          | 4.60   | 9.40   |
| 61     | 01/23/06          | 5.20   | 9.90   |
| 62     | 01/30/06          | 5.2 J  | 10 J   |
| 63     | 01/30/06          | 34.00  | ND     |
| 64     | 01/30/06          | 17.00  | ND     |
| 65     | 01/30/06          | 4 J    | 8.8 J  |
| 66     | 01/30/06          | 4.2 J  | 12 J   |
| 67     | 01/30/06          | 4 J    | 9.3 J  |
| 68     | 01/30/06          | 76.00  | 10 J   |
| 69     | 01/30/06          | 0.76 J | 1.6 J  |
| 70     | 01/30/06          | 1.5 J  | 2.9 J  |
| 71     | 01/30/06          | 0.6 J  | 4.3 J  |
| 72     | 01/30/06          | 0.82 J | 2.8 J  |
| 73     | 01/30/06          | 0.71 J | 4.1 J  |
| 74     | 01/30/06          | ND     | 2.1 J  |
| 75     | 01/30/06          | 2.8 J  | 1.9 J  |
| 76     | 01/30/06          | 1.2 J  | 2.8 J  |
| 77     | 01/30/06          | 0.71 J | 2 J    |
| 78     | 01/31/06          | ND     | 14 J   |
| 79     | 02/02/06          | 0.76 J | 1.7 J  |
| 80     | 02/02/06          | 0.55 J | 2.6 J  |
| 81     | 02/02/06          | 1.9 J  | 1.4 J  |
| 82     | 02/09/06          | ND     | ND     |
| 83     | 02/09/06          | ND     | _ND    |
| 84     | 0 <u>2/0</u> 9/06 | ND     | 0.76 J |
| 85     | 02/21/06          | ND     | ND     |
| 86     | 02/21/06          | ND     | ND     |
| 87     | 02/28/06          | 0.71   | 1.70   |
| 88     | 02/09/06          | ND     | 1.80   |
| 89     | 02/28/06          | ND     | 1 J    |
| 90     | 03/01/06          | 0.82   | _ND    |
| 91     | 03/22/06          | 0.98   | ND     |
| 95 *   | 05/31/06          | 7.6 J  | 6.7 J  |
| 96 *   | 05/31/06          | 16 J   | 7.0 J  |
| 97 **  | 05/31/06          | 5.6 J  | 0.83 J |
| 98 **  | 05/31/06          | 1.1 J  | 13 J   |

NOTES:

All TCE and PCE results in ug/M3
J" = Estimated concentration
"ND' = Not detected

- \* = Confirmation sample for Lab ID 59
- \*\* = Confirmation sample for Lab ID 68

### Table 7 Sidney Area SVI Program Building Owner Requested Indoor Air Samples TCE and PCE Concentrations

| Lab ID | Sample Date | TCE   | PCE    |
|--------|-------------|-------|--------|
| 28 IA  | 05/17/05    | 4.48  | 2.00   |
| 38 BA  | 05/18/05    | 6.83  | ND_    |
| 29 AA  | 05/17/05    | 5.74  | 2.76 J |
| 43 IA  | 05/26/05    | 2.79  | ND     |
| 42 BA  | 05/26/05    | 4.42  | 0.69 J |
| 44 AA  | 05/26/05    | 4.05  | 0.69 J |
| 46 IA  | 05/31/05    | 4.15  | 0.76 J |
| 45 BA  | 05/31/05    | 4.86  | ND     |
| 47 AA  | 05/31/05    | 72.60 | ND     |
| 62 BA  | 01/30/06    | 5.2 J | 10 J   |
| 63 IA  | 01/30/06    | 34.00 | ND     |
| 64 AA  | 01/30/06    | 17.00 | ND     |
| 92 BA  | 05/31/02    | 5.84  | 3.24   |
| 93 FA  | 05/31/02    | 7.97  | ND     |
| 93 AA  | 05/31/02    | 4.59  | ND     |

All TCE and PCE results in ug/M3

IA = Living Space

BA = Basement Air

AA = Ambient Outdoor Air

# FIGURES









