

Summary of Findings: 5 Bells Neck ESA Phase 2

1.) In 1998, Pinewood Village conducted testing and found Chlorinated Solvents in Test Well "MW1" at a depth of 50' .

2.) In 2011 Bennett Environmental Associates, Inc (BEA) was hired by Town of Harwich to perform a Phase 2 Environmental Site Assessment for 5 Bells Neck Road.

3.) BEA installed two test wells on 5 Bells Neck Site. BEA-1S (shallow) was drilled to 21'. BEA-1D (deep) was drilled to 46'.

4.) BEA sent soil samples from both wells to laboratory for analysis.

5.) BEA-1D (deep) reported the presence of chlorinated solvents levels in the deep well.

6.) BEA-1S (shallow) found no chlorinated solvents, VOCS or anything else hazardous.

7.) "This data documents that chlorinated solvents impacts are present in the deep aquifer but not in the shallow aquifer, indicating the source as being some distance from the subject property (5 Bells Neck). "

- Page 4, paragraph 2, sentence 2.

8.) Findings: Owner of 5 Bells Neck is not liable for presence of Chlorinated Solvents. The presence of chlorinated solvents impacts over a large area of West Harwich has long been identified and attributed to the Dennisport Automatic Coin Laundry site for which a number of DPS files have been made.

**PHASE II
ENVIRONMENTAL SITE ASSESSMENT**

5 Bells Neck Road
Map 10 Parcel G1
West Harwich, MA 02671
Project #BEA10-10288

MARCH 10, 2011

BENNETT ENVIRONMENTAL ASSOCIATES, INC.

LICENSED SITE PROFESSIONALS ♪ ENVIRONMENTAL SCIENTISTS ♪ GEOLOGISTS ♪ SANITARIANS

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WATER SUPPLY DEVELOPMENT, OPERATION & MAINTENANCE ♪ WASTEWATER TREATMENT, OPERATION & MAINTENANCE

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Prepared for:

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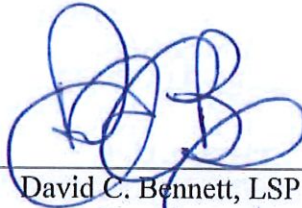
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**PHASE II
ENVIRONMENTAL SITE ASSESSMENT**

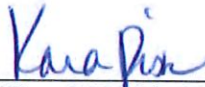
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MARCH 10, 2011

I certify that this Phase II ESA was conducted under my direction and supervision. I further certify that I have reviewed and approve this report, and the methods and procedures employed in development of the report conform to industry standards in the market as of this date.



David C. Bennett, LSP
President



Kara M. Risk, RS
Senior Project Manager



Date

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1.0 Executive Summary

1.1-1.2 Purpose/Introduction, Scope of Services/Methodology, Findings

This report presents the results of the Phase II portion of an Environmental Site Assessment (ESA) performed by BENNETT ENVIRONMENTAL ASSOCIATES, INC. (BEA) on behalf of Bob Cafarelli of the Town of Harwich Engineering Department. The Phase I was completed to address the Recommendations made by BEA in the December 14, 2010 Phase I Environmental Site Assessment (ESA) with Limited Physical Testing for the Subject Property at 5 Bells Neck Road in Harwich, MA. The Findings of the Phase I report identified numerous Potential Environmental Conditions (PECs) including 1) a metal object off the northeast corner of the building which could not be identified, 2) the hydrologically upgradient presence of a cemetery directly abutting the Subject Property to the south, 3) the presence of a hydrologically downgradient property [Pinewood Village Condominiums (PVC)] which has asserted Downgradient Property Status (DPS) for the presence of chlorinated solvents, as well as petroleum, in their former public water supply well and on-site monitoring wells, and 4) the hydrologically upgradient presence of a known active Disposal Site for the release of chlorinated solvents as related to former on-site dry cleaning operations. A Historic Recognized Environmental Condition (HREC) was also identified as associated with the documented migration of a solvent plume through the area of the Subject Property [Refer to "Site Investigation Report – Harwich PCE/TCE Study Area" prepared by SAIC Engineering, Inc. (SAIC) and dated March 2003 in Appendix B].

Based on the aforementioned PECs and HREC, BEA recommended the further investigation and identification of the metal object off the northeast of the subject building, a file review at the MA DEP relative to the DPS filed for PVC and the sampling of select existing wells at PVC for volatile organic compounds (VOCs) in review of current environmental conditions, and the installation and sampling of a monitoring well couplet at the Subject Property for VOCs and formaldehyde impacts.

On January 18, 2011, BEA conducted a file review at the MA DEP Southeast Regional Offices in Lakeville, MA. Files reviewed were associated with the downgradient Site at Pinewood Village Condominiums and included an "Immediate Response Action (IRA) Completion Report" prepared by KEY Environmental Services, Inc. (KES) dated January 18, 1998, "Supplemental IRA Completion Report" prepared by KES dated August 18, 1998, and "Downgradient Property Status Opinion" prepared by KES dated February 16, 1998. A report titled "Site Investigation Report – Harwich PCE/TCE Study Area" prepared by SAIC Engineering, Inc. (SAIC) and dated March 2003 was also provided for review [Refer to Appendix B].

Data reviewed in these reports was used in determining which of the existing PVC monitoring wells to sample in review of current environmental conditions in this downgradient location. Based on the historical report of chlorinated solvent impacts in the existing MW-1, screened at 50' below grade surface (bgs) and located some 52'(+/-) to the northeast, this monitoring well was selected for VOCs analysis. In addition, based on its near proximity to the Subject Property, as some 16' off the northeast corner of the subject building, MW-5, screened at 30' bgs, was also selected for VOCs analysis.

The Subject Property was properly marked out and cleared for utilities by Dig Safe and on January 27, 2011 BEA was joined on-site by Jenkins Well Drilling to conduct test borings (TB) and install two monitoring wells [BEA-1S (shallow) and BEA-1D (deep)]. The location of the test borings was based on the assumed northeasterly groundwater flow direction, as downgradient of the documented release at Dennisport Automatic Coin Laundry, and upgradient of formerly documented groundwater impacts at PVC. This location was also in near proximity to the southerly abutting cemetery in review of groundwater impacts from embalming fluids.

Test boring TB-1/BEA-1S was advanced to a depth of 21' below grade surface (bgs), while TB-1/BEA-1D was advanced to a depth of 46' bgs. A soil sample was collected at the final depth of BEA-1D. The sample was placed in 250-mL glass jar and sealed with aluminum septa. The jar was agitated to develop organic vapors and the soil sample was screened in the field with a photoionization detector (PID) for total organic vapors (TOV) by "jar headspace" method as consistent with the MA DEP "Interim Soils Policy..." WSC 94-400. The soil samples reported a TOV concentration of 2.5 ppmv. With groundwater encountered at 12' bgs, a 10' PVC screen was set at 21' bgs at monitoring well BEA-1S, while a 10' screen was set at 46' bgs at BEA-1D.

On January 28, 2011 the newly installed monitoring well couplet (BEA-1S/D) as well as MW-1 and MW-5 at Pinewood Village Condominiums was developed, purged and sampled for VOCs via Method 8260B. BEA-1S was also sampled for formaldehyde in review of potential groundwater impacts from the adjacent cemetery and total petroleum hydrocarbons (TPH) in review of the historical presence of TPH reported at PVC. Each of the samples was field preserved with ice in a cooler and submitted to Groundwater Analytical Laboratories, Inc. on a priority turnaround for MA Certified analysis.

While on site, the aforementioned metal object identified off the northeast corner of the subject building was investigated. Upon further review, a metal tank was discovered beneath the building. Physical evidence indicates that the tank pre-dated the centralized plumbing of the building and that the vessel was intentionally located below the area of the bathrooms and sinks as a septic appurtenance. Additionally, the construction of the vessel is typical of a metal septic tank, rather than a fuel storage tank. What appeared to be the remnants of a second tank were also noted to the east of the vessel. A portion of this second tank extended beyond the foundation wall. It was noted that the metal object observed off the chimney at the northeast corner of the building was associated with a porthole to the secondary tank.

A 1' composite soil sample was collected off the east end of the bottom of the primary tank [BOT(E)] for field screening. In addition, a hand boring (HB-3) was conducted outside the adjacent north foundation wall to some 13' bgs, with groundwater encountered at 12' bgs. While field screening indicated no significant impacts with all TOV concentrations ≤ 0.5 ppmv, in order to fully qualify any significant impacts associated with the existing and/or former tanks, soil samples BOT(E)@1' and HB-3:10-12' were prepared, as was a Tank Sludge sample as representing the current contents of the existing vessel, and

forwarded to Groundwater Analytical for confirmatory total petroleum hydrocarbon (TPH) analysis.

Laboratory analysis dated February 4, 2011 reported a TPH concentration of 76mg/Kg in the Tank Sludge sample, identified as within the lubricating oil range. The HB-3:10-12' and the BOT(E) @1' soil samples reported TPH as below the reporting limit (BRL) of the analyses. Both the reported TPH concentration in the sludge and the reporting limits for HB-3:10-12' and BOT(E)@1' are well below the applicable RCGW-1 Reportable Concentrations and the GW-1 Method 1 – Risk Characterization Standards. As such, none of the soil or sludge samples submitted represent a material threat of release to the property, nor notification nor remedial response liability for the property owner.

Laboratory analysis reported chlorinated solvents impacts exceeding the applicable RCGW-1 and GW-1 Method 1 Standards in groundwater at BEA-1D with tetrachloroethylene (PCE) at a concentrations of 260ug/L and trichloroethene (TCE) at 25ug/L. No VOCs, formaldehyde nor TPH impacts were reported in monitoring well BEA-1S. This data documents that the chlorinated solvent impacts are present in the deep aquifer but not in the shallow aquifer, indicating the source as being some distance from the Subject Property. Furthermore, this data absolves any potential impacts associated with the abutting cemetery or any significant petroleum-related impacts from the tanks identified beneath the subject building or from an off-site source. PCE was reported at a concentration of 9ug/L, as exceeding the RCGW-1 and Method 1 GW-1 standard of 5ug/L, in MW-1 located at the PVC property. No groundwater impacts were reported in the VOCs testing at the PVC monitoring well MW-5. As such, it is noted that the chlorinated solvent impacts documented in 1997 persist at concentrations above the RCGW-1 and Method 1 GW-1 standards at the northerly and easterly abutting property as well as the Subject Property, as attributed to RTN 4-12832. It should be noted that, wherein the subject building is boarded up and vacant with no utility service, no current exposure pathways exist and no Imminent Hazard conditions are present for the Subject Property.

1.3 Findings

In communications with Mr. John Handrahan of the MA DEP, it has been confirmed that Release Notification liability is not warranted under 310 CMR 40.0317(16), wherein release notification has been provided to the Department for the Disposal Site as the identified source, a response action is being undertaken, and the groundwater impacts identified at the Subject Property are consistent with those for which notification has previously been made to the Department [Refer to Appendix B].

Furthermore, the Department has confirmed that the Town is not required to file an Assertion of Downgradient Property Status (DPS) to be afforded the liability protections under the MA General Law, Chapter 21E, Section 5D, wherein 1) groundwater impacts were released from an upgradient source (Dennisport Automatic Coin Laundry is the sole identified Potentially Responsible Party (PRP) upgradient of the Subject Property), 2) the Town did not and does not own or operate the Site from which the source of the release originated, 3) the Town has complied with the notification requirement in accordance with 310 CMR 40.0317(16), and 4) the Town will provide reasonable access to the Subject

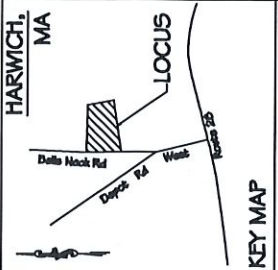
Property, take reasonable steps to prevent exposure to groundwater impacts and/or Imminent Hazard conditions, will not reasonably impede or interfere with the performance of response actions, and will not exacerbate the release [Refer to Appendix B].

1.4-1.5 Conclusions/Recommendations

- The Town of Harwich is categorically not liable for response action costs in the absence of filing a full Assertion of Downgradient Property Status. BEA does recommend, however, that the Environmental Site Assessment (ESA) reports prepared by BEA be forwarded to the MA DEP to document our discussion with the Department relative to regulatory procedures under the MCP and to frame these apparent protections afforded under Chapter 21E.
- The presence of chlorinated solvent impacts over a large area of West Harwich has long been identified and attributed to the Dennisport Automatic Coin Laundry Site, for which a number of DPS filings have already been made. Mr. Handrahan has indicated that the MA DEP would investigate the responsibility of the identified Responsible Party to monitor exposure risks and cleanup under their Remedial Response Performance obligations and to consider the validity of claims for secondary sources. In the interim, BEA recommends Level 3, Ambient Air Quality testing within the existing structure at the Subject Property to evaluate any potential Imminent Hazard or Significant Risk of organic vapor entry into the building or future structures if site redevelopment or reoccupancy is intended within the next 12 month.

****Massachusetts General Law, Chapter 21E, states that the property owner may be legally and financially liable for the presence of any hazardous material or petroleum product present on their property, in the groundwater beneath their property, or in subsurface materials. The owner of the property on which the release has occurred is legally required to notify the Massachusetts Department of Environmental Protection about the discovery of such materials in excess of the prescribed concentrations or quantities and contract a Licensed Site Professional to supervise remedial response actions.**

APPENDIX A



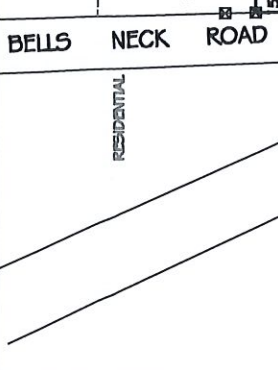
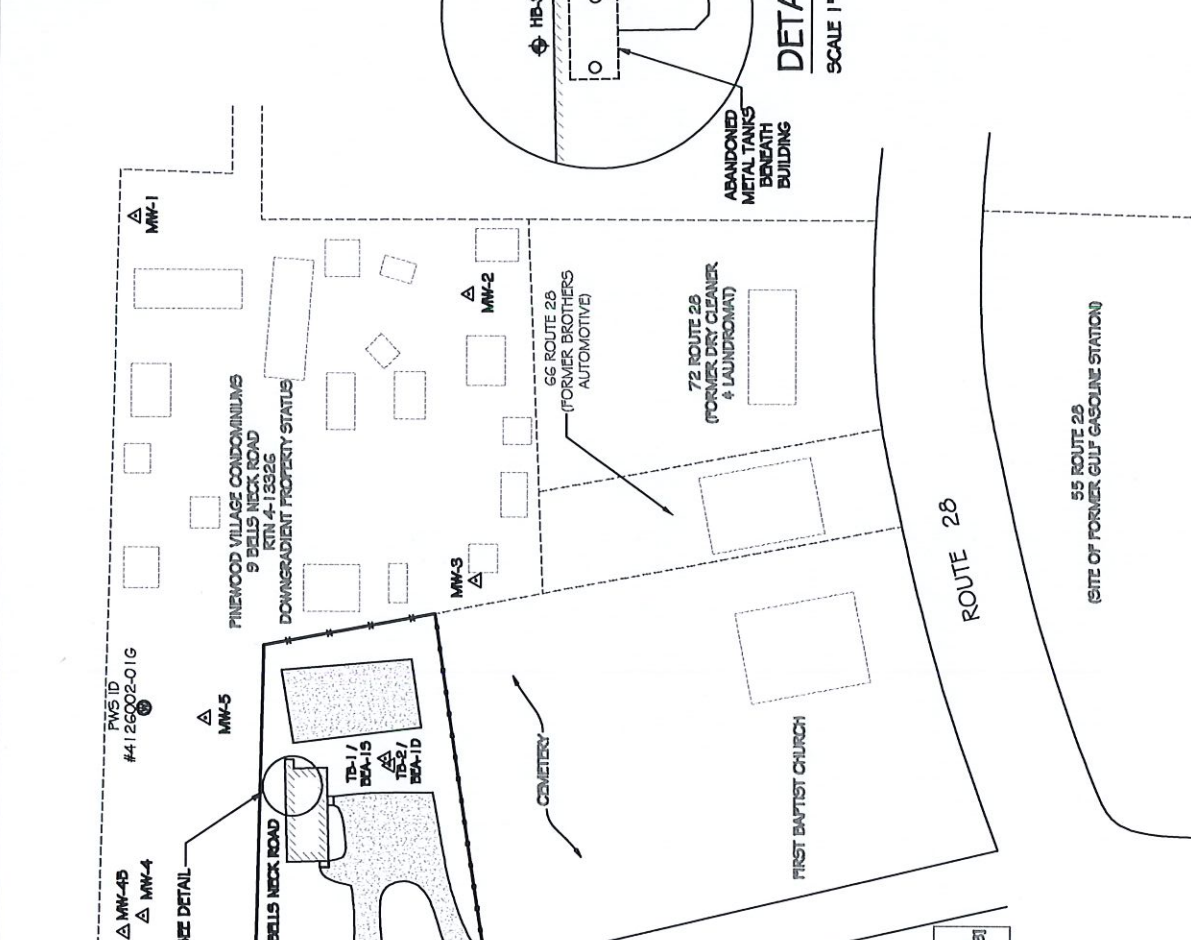
REFERENCE

Town of Harwich Assessor's Map 10
 Topographic Site Plan of Land in West Harwich by Town of Harwich Engineering Department dated 4/30/07

Key Environmental Services, Inc.
 Proposed Ground Water Monitoring Well Locations sketch for 9 Bells Neck Road

SAC Engineering, Inc. Site Investigation Report Dated March 2008

- LEGEND**
- △ MONITORING WELL
 - △ MONITORING WELL COUPLER
 - CONCRETE BOUND
 - ⊠ CONCRETE POST
 - ⊙ NON-COMMUNITY PUBLIC WATER SUPPLY WELL
 - ⬢ HAND BORING



NOTE

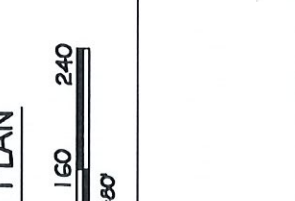
ALL LOCATIONS ARE APPROXIMATE

TOWN OF HARWICH
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DATE	02/10/11	BY	AS/Noel
SCALE	AS NOTED	CHECKED	KMR
PROJECT	PHASE II	DATE	BIA-10-10288



SKETCH PLAN

FORMER DRY CLEANER
 13 HALL STREET - KTN 4-12932
 CLASS C-1 RAO
 0.40 MILES SW (++)

FORMER DRY CLEANER
 CORNER OF DIVISION STREET & ROUTE 28
 (PER SAC ENG. REPORT DATED MARCH 2008)
 0.30 MILES SW (++)

