



73 William Franks Drive
West Springfield, MA 01089
(413) 781-0070
(413) 781-3734
www.atcassociates.com

June 23, 2010

Town of Petersham
Petersham Town Office
P.O. Box 486
3 South Main Street
Petersham, Massachusetts 01366
ATTN: Ms. Ann Lewis

Re: Revised Limited Phase II Site Assessment
Former Nichewaug Inn and Academy
25 Common Street
Petersham, Massachusetts 01366

Dear Ms. Lewis:

On behalf of the Town of Petersham, ATC Associates Inc. (ATC) is submitting this Limited Phase II Site Assessment at the former Nichewaug Inn and Academy (here in referred to as "the Site"). The Limited Phase II Site Assessment was conducted to assess potential historical contamination at the Site defined in a Phase I Environmental Site Assessment report (Phase I Report) conducted by Environmental Compliance Service (ECS) of Agawam, Massachusetts, dated May 2007. The scope of the investigation was based on recognized environmental conditions identified by ECS and any other areas not identified in the report that may have required further investigation.

SITE DESCRIPTION

The Site is located in the center of the Town of Petersham at 25 Common Street. The Site is 6.66 acres composed of an abandoned large wooden shingle and brick building with several additions, a garage built in 1940, several parking areas, and an abandoned tennis court. The electric service has been cut from the building. A septic system is located to the south of the auditorium and academy and a private drinking well is located to the south of the garage. The heating system is forced hot water reportedly fired by four 330 gallon No. 2 fuel oil above ground storage tanks (ASTs) which are located in the basement of the original inn building.

According to a Town of Petersham representative, Ms. Nancy Allen, and the ECS Phase I Report, the first known use of the Site was as a tavern until it burned down in 1847. The Nichewaug Inn was constructed in 1850, burned down in 1897, and subsequently rebuilt in 1899. The Site was used as a resort until 1948. The Sisters of Maria Assumpta purchased the property in 1851, and utilized the facility as a girls boarding school. In 1952 the academy addition was constructed. The academy was closed in 1972 but still used as a retreat by the Sisters. Various developers have purchased the property from 1985 until 2007 when it became a defunct property of the Town of Petersham. According to available records, one 5,000 gallon No. 2 fuel oil underground storage tank (UST), one 1,000 gallon No. 2 fuel oil UST, one 5,000 gallon No. 4 fuel oil UST, and one 500 gallon gasoline UST were previously removed from the Site. No UST closure documentation

9C-2

was available. A 275 gallon AST was observed on a concrete slab adjacent to the transformer room. The contents of the AST is presumed to be No. 2 fuel oil. One underground grease trap is located between in Chapel and Kitchen wings. A Site sketch is located in Attachment I.

VISUAL RECONNAISSANCE

On October 9, 2009, ATC completed visual reconnaissance at the Site. ATC inspected the presumed former locations of the USTs, the existing 275 gallon AST, the area around the grease trap, and the septic leach field. ATC observed no signs of leakage, staining or vegetative stress in those areas of the Site. The 275 gallon AST appeared to be in fair to poor condition. The quantity of product remaining in the AST is not known. No evidence of leaking or staining of the concrete was observed around the AST. An inspection of the transformer room concluded the transformers were fairly new and in good condition with no indication of leakage or staining in the vicinity of the transformers. Labels on the transformers indicated no PCBs were present. Based on observations from the subgrade transformer room and concrete slab on which the 275 gallon AST is housed at the Site, groundwater appeared to be present at approximately nine (9) feet below gradient. No evidence of groundwater monitoring wells was observed on Site.

On June 21, 2010, ATC completed a visual reconnaissance of the interior boiler rooms and ASTs storage area in the building on Site. Town of Petersham personnel drained groundwater from the basement and removed the ASTs from the basements prior to the ATC's arrival. Reportedly, approximately 800 gallons of fuel oil were removed from the tanks. The tanks were then reportedly disposed of as scrap metal. ATC was escorted by James Meehan, of the Town of Petersham, during interior reconnaissance activities. The four 330-gallon ASTs were formerly stored in a concrete bermed area. A thin layer of absorbent was observed in the bermed area. No staining was observed in the absorbent material. Mr. Meehan stated the absorbent material was not deployed by the Town of Petersham and it was observed upon the drainage of the basement. The concrete flooring and berm appeared to be intact. No staining was observed on the concrete in the AST storage area. ATC also conducted a visual inspection of the two boiler rooms in the Classroom Wing and Main Wing. The boiler in the Main Wing was contained in a concrete bermed area. No evidence of staining was observed around the boilers. Based on these observations, there is no evidence of a release of fuel from the former ASTs or boiler rooms.

SOIL BORING AND SOIL SAMPLE COLLECTION EVENT

On November 13, 2009, Martin Geo-Environmental of Belchertown, Massachusetts (Martin), with ATC oversight, advanced six soil borings in the former locations of the four USTs historically located at the Site, and adjacent to the grease trap and leach field present at the Site using a direct push geoprobe. Soil samples were collected in continuous 2 foot intervals and screened for soil character, moisture, density, color, visual and olfactory evidence of petroleum staining, and screening with a Photoionization Detector (PID) for volatile organic compounds (VOCs). Soils were consistently characterized as tan /brown, medium dense silt, throughout the Site. No evidence of petroleum contamination, staining or odor, was observed during the event and PID readings were consistently less than the instrument reporting limit of 1 part per million (ppm). Groundwater was observed at approximately 9 feet below grade. No bedrock was observed during the subsurface investigation. Boring logs are included in Attachment 4.

SOIL SAMPLE ANALYTICAL RESULTS

One representative soils sample was collected from the interval above the water table in each boring. Soil samples were submitted to Spectrum Analytical (Spectrum) of Agawam, Massachusetts for laboratory analysis. The soil sample collected from the former gasoline UST location (ATC-1) was analyzed for ethylene dibromide (EDB), total Lead, and Volatile Petroleum Hydrocarbons (VPH). The former fuel oil UST locations (ATC-2 through ATC-4) and grease trap location (GT-1) were analyzed for Extractable Petroleum

Hydrocarbons (EPH), and the leach field (LF-1) soil sample was collected for VOCs via the EPA method 8260, EPH, and total Resource Conservation and Recovery Act (RCRA) 8 Metals (Silver, Arsenic, Barium, Cadmium, Chromium, Mercury, Lead, and Selenium).

Laboratory results indicated no detectable concentrations in ATC-1 through ATC-4 and GT-1 soil samples. Detectable concentrations of Silver, Barium, Chromium, Lead and Selenium were reported in LF-1. Detectable concentrations are below Massachusetts Department of Environmental Protection (MA DEP) RCS-1 and RCS-2 reportable concentrations. All other LF-1 soil sample results were below laboratory reporting limits. A copy of the laboratory analytical report is included in Attachment 2. Tables comparing the samples to applicable reportable concentration standards are included in Attachment 3.

GROUNDWATER MONITORING WELL INSTALLATION

Monitoring wells ATC-1 through ATC-4 were completed as one inch-diameter groundwater monitoring wells. The groundwater monitoring wells were constructed to a depth of approximately 14 feet in ATC-1, ATC-2, and ATC-4 and 11 feet in ATC-3 due to refusal. The wells were constructed with 10 feet of PVC 0.010 inch slotted screen, finished to grade with solid PVC casing. In monitoring wells ATC-1, ATC-2, and ATC-4, number 1 grade sand pack filled the boring outside the well casing to approximately 2 feet below grade. A one foot thick layer of bentonite, native sand, and a road box sealed in concrete finished the construction of the monitoring wells to surface grade. Due to the shallow nature of ATC-3, number 1 sand pack filled the boring to one foot below grade, one half foot of bentonite and native sand with a concrete sealed road box finished the monitoring well flush with grade. The monitoring wells were left to stabilize prior to sampling.

GROUNDWATER MONITORING WELL SAMPLING EVENT

On December 3, 2009, ATC conducted a groundwater sampling event at the Site. ATC used an electronic water level indicator to determine groundwater depth and the presence of non-aqueous phase liquid (NAPL). Groundwater depths ranged from 4.64 feet below grade (fbg) in ATC-4 to 6.46 fbg in ATC-1. No NAPL was observed during the gauging event. Then, four volumes of standing water were purged from the groundwater monitoring wells using a peristaltic pump and a groundwater sample was collected and submitted to Spectrum for analysis. The groundwater sample from ATC-1 was submitted for analysis of VPH, EDB, and dissolved Lead. Groundwater samples from ATC-2 through ATC-4 were submitted for EPH analysis via DEP methodology and in accordance with DEP's Data Quality Enhancement Program (DQEP). No petroleum odor or sheen was observed during the collection of the water samples. Laboratory analytical results reported no concentrations of EPH/VPH fractions and target analytes greater than the laboratory reporting limits. A copy of the groundwater laboratory analytical report is provided in Attachment 2. Tables comparing the samples to applicable reportable standards are included in Attachment 3.

CONCLUSIONS

The groundwater sample laboratory analytical results for Benzo(a)anthracene, Benzo(b)fluoranthrene, Indeno(1,2,3-cd)pyrene, and Ethylene dibromide are below laboratory detection limits but exceed the reportable concentrations for GW-1 standards. However, based on ATC's field observations and measurements of all samples collected, specifically soil samples, no evidence of contamination was observed. It is highly unlikely groundwater contamination would be present without observed soil impacts. It is the opinion of ATC that historical and existing conditions at the Site, with the limitation of conditions in the site building, indicate no conditions mandating a DEP reportable condition.

Visual reconnaissance of the boiler rooms and AST storage areas inside the Site building did not indicate any evidence of a release.

LIMITATIONS

This Limited Phase II Site Assessment report was generated for the sole intended use of the Town of Petersham. The information used in this report was gathered using generally accepted industry methods and practices at the time the report was generated. This report represents the conditions, locations, and materials that were observed at the time the fieldwork was conducted. The professional opinions represented in this report are based solely on the Scope of Work conducted and the sources referenced and relied upon in this report. All recommendations and conclusions should be viewed in the context of the date and circumstances of this report. No warranties, expressed or implied, are made.

Sincerely,
ATC Associates Inc.



Terri Routhier
Senior Staff Scientist
Extension 381



Rob Smith, LSP
Division Director, Environmental Services
Extension 101

attachments