1.0 INTRODUCTION

At the request of Ethan Allen, Inc. (Ethan Allen), Engineering Management, Inc. (EMI) performed a Phase II Environmental Site Assessment for the former furniture manufacturing facility and property located at 7 Grove Street, Boonville, Oneida County, New York. A Phase I Environmental Site Assessment (ESA) conducted in September 2004 identified potential areas of interest and recommended investigation activities at the areas of interest to confirm the absence of potentially hazardous constituents associated with historical facility operations.

In October and November 2006, soil samples were collected from the areas of interest listed below:

- Former underground storage tank areas
- Former empty chemical drum storage area
- Former hazardous waste loading area
- Perimeter of the wood chip disposal area

In November 2006, groundwater samples were collected from temporary wells installed at the perimeter of the wood chip disposal area and, in May 2007, a groundwater sample was collected from a permanent well installed downgradient of the wood chip disposal area. Soil samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), RCRA metals including antimony, and, for soil samples collected from the former underground storage areas, total petroleum hydrocarbons (TPH) for diesel-related and gasoline-related organics. Groundwater samples were analyzed for VOCs, SVOCs, and RCRA metals including antimony.

In addition to the soil and groundwater sampling, a site inspection was conducted to determine the status of areas of interest identified during the Phase I ESA. Based on the results of the Phase II assessment activities and site inspection, Ethan Allen conducted asbestos containing material (ACM) and soil removal activities in May and June 2007. The removal activities included:

- Removal or repair of ACM within the former facility
- Excavation and offsite disposal of soil from the former underground storage tank areas

This Report summarizes the Phase I ESA, describes the Phase II Assessment sampling methods, analyses, and results, and describes the ACM and soil removal activities conducted at the site.

1.1 Property Description

Figure 1 presents an overview of the general vicinity of the subject property. The former Boonville Division of Ethan Allen occupies 2 parcels, encompassing approximately 87 acres. The main facility occupies a portion of the property at the southern termination of Grove Street, immediately after Grove Street crosses Charles Street. A small materials storage building is located on the second parcel, across Charles Street (north) from the main facility at the north corner of Grove and Charles Streets. A large portion of the main facility parcel extends to the southeast and is undeveloped. This undeveloped portion was historically used for storage and disposal of scrap wood, wood chips, and sawdust. Figure 2 shows the facility layout and the two parcels owned by Ethan Allen.

Residential properties are adjacent to the main facility parcel east and west along Charles Street and to the northeast across Charles Street. Undeveloped property lies to the south and southeast of the main facility parcel and is wooded or contains vegetation normally associated with wetland or low-lying areas that collect precipitation runoff. Residential properties are adjacent to the materials storage building parcel north along Grove Street and west along Charles Street, and are also to the east across Grove Street.

Generally, the subject property is relatively flat at approximately 1133 feet above mean sea level. The subject property rests on a slightly elevated area with respect to adjacent properties; therefore, the topography slopes gradually to the north and south. Much of the main facility parcel was altered by the stockpiling of scrap wood and woodchips, which increased the elevations east and south, and the former storage of raw lumber for the saw mill, which

decreased the elevations west in order to contain the water that was sprayed to keep the lumber from drying out.

The main facility parcel contains a former furniture manufacturing facility. The facility, which primarily manufactured bedroom furniture, occupies approximately 200,000 square feet of space. A sawmill, boiler house, and drying kilns are located as separate buildings on the main facility parcel (Figure 2). The materials storage building, north of the main facility, occupies approximately 12,500 square feet of space. The building was used for the storage of supplies and completed furniture. A small gravel lot at the west side of the building allowed vehicle access and loading/unloading of materials.

With the exception of a small asphalt-paved area at the entrance to the main facility, portions of the property that are not covered by structures are covered with gravel or are natural soil materials. Scrap wood, wood chips and sawdust cover the east/southeast portion of the main facility parcel. Storm water collected from the main facility parcel is conveyed via underground piping or surface ditches to the low-lying area to the south. Similar to the surrounding residential properties, the materials storage building parcel retains the precipitation that falls upon the parcel or it is conveyed to the Village of Boonville storm sewer system (catch basins) that is located on Charles and Grove Streets.

1.2 Facility History

The Union Loom Works was the first owner and builder of the original furniture manufacturing plant on the main facility parcel. The Union Loom Works was reportedly constructed in 1919. Cavalier Wood Products operated the facility after the Union Loom Works, although the date the company changed ownership is not known. In approximately 1949, Baumritter Corporation bought Cavalier Wood Products at auction and created the Boonville Furniture Corporation, which manufactured athletic equipment and specialized in ping pong tables and paddles. The Boonville Furniture Corporation added bedroom furniture to its product line in the mid 1950s. Ethan Allen purchased the facility in 1971 and continued to manufacture bedroom furniture until

the facility closed in June 2004. During Ethan Allen ownership, the facility was significantly expanded, with additions added in 1971, 1973, 1976, 1978, 1996, and 1999.

During Ethan Allen operations, raw materials included various types of wood (for example, cherry and maple), stains, sealers, and glue. In addition, solvents and mineral spirits were used as thinners and cleaners. Industrial water conditioners were used to treat the water used by the boiler. Lubricants and lubricating oils were used in the maintenance of the furniture manufacturing equipment and other equipment.

Wastes generated included scrap wood, used stains, used sealers, used solvents and mineral spirits, and filters from the stain and sealer operations. Scrap wood was burned at the facility to operate the boiler; used stains, sealers, solvents, and mineral spirits were transported offsite for disposal as hazardous waste. Empty drums of stains and sealers were stored in the open on the eastern portion of the property until removed for recycling. Water softening sludge from the treatment of boiler water was disposed at a municipal landfill.

1.3 Phase I Environmental Site Assessment

A Phase I ESA was conducted by EMI in September 2004 when Ethan Allen was planning the decommissioning of the facility. The Phase I ESA Report identified the following areas of interest:

- The walls and floors of the finishing material staging areas and Lacquer Storage area should be thoroughly scraped and cleaned to remove materials and residue. The removed materials and cleaning wastes should be appropriately characterized and disposed.
- The floors around the spray booths should be thoroughly cleaned to remove materials and residue. The removed materials and cleaning wastes should be appropriately characterized and disposed.
- The asbestos containing material (ACM) removal scope of work should be implemented by a licensed asbestos company.

- Empty chemical drums are stored in the open on the eastern portion of the main facility parcel. Visual inspection and sampling of the underlying soil should be performed to confirm that no impact is present from residues, which may be present in the drums.
- The hazardous waste storage area should be closed in accordance with RCRA guidelines and a letter documenting the closure should be submitted to NYSDEC. An inspection should be performed of the outdoor area in the vicinity of the loading dock adjacent to the hazardous waste storage area to ensure that any past spill has not impacted the soil.
- The inactive aboveground storage tanks (ASTs) staged on the main facility parcel should be properly decommissioned and removed from the parcel.
- The oil/water separator in the boiler room should be inspected, with oil removal and cleaning performed, if necessary.
- It should be verified that the wood chip, sawdust, and scrap wood stockpile and disposal area on the eastern portion of the main facility parcel is exempt under NYSDEC solid waste regulations 6 NYCRR, Chapter IV, Subchapter B, Part 360.

2.0 PHASE II ASSESSMENT ACTIVITIES

The scope of work for the Phase II Environmental Site Assessment included the following activities:

- Inspection of the former finishing material staging areas, Lacquer Storage area, and spray booth areas to verify that appropriate decontamination had been conducted.
- Inspection of the former hazardous waste storage area to verify that the area does not contain waste or impact from the storage activities. Collection of four soil samples from beneath the loading dock where the hazardous wastes were loaded for offsite disposal.
- Inspection of the ACM locations to verify that the ACM removal was completed.
- Inspection of the inactive AST staging areas to verify that the ASTs have been removed.
- Inspection of the oil/water separator to verify that decommissioning has occurred.
- Collection of four soil samples from the former empty chemical drum storage area to confirm that impact is not present from drum residues.
- Collection of four soil samples (two at each location) from two former underground storage tank (UST) locations. The USTs were removed prior to the date of the Phase I ESA.
- Installation of six temporary monitoring wells at the perimeter of the wood chip disposal area. Collection of soil and groundwater samples from the temporary monitoring well locations.

All of the activities listed above were completed in October and November 2006. One additional investigation activity was completed in May 2007.

- Installation and sampling of one permanent monitoring well downgradient for the former wood chip disposal area.

2.1 Inspection of Former Finishing Material Staging Areas, Lacquer Storage Area, and Spray Booth Areas

An inspection of the entire facility was conducted with particular attention on areas of interest identified during the Phase I ESA. The former finishing material staging areas, lacquer storage area, and spray booth areas were clean and all materials removed. The floors and walls had been scraped to remove finishing materials that accumulated at the areas. Many of the spray booths had been decommissioned and were no longer present at the facility. Equipment for transfer of the finishing materials to the work areas (hoses, piping, pumps, etc.) had been removed. A photograph of a typical spray booth after decontamination is presented in the photograph log included as Appendix A.

2.2 Inspection and Soil Sampling of the Former Hazardous Waste Storage Area

The former hazardous waste storage area was located on the west side of the main facility, adjacent to the lacquer storage area, designated "Lac Stor" on Figure 2. The area was clean and no waste containers were present. No evidence of impact from spills was identified on the floor and walls. Four soil samples were collected below the loading dock where the hazardous waste was loaded for offsite disposal. The sample locations are shown on Figure 2. Samples were collected using a hand auger and VOC encore sampler from 6 to 12 inches below the existing ground surface. Sampling equipment was decontaminated with a non-phosphate detergent wash and deionized water rinse prior to beginning the sampling activity and after each sample was collected. Samples are identified as BV for the Boonville location, HZ1 through HX4 for former hazardous waste storage area samples, and include the sample collection date. A photograph of the sample locations is presented in the photograph log included as Appendix A. Sample locations were screened with a photoionization detector (PID) immediately after removing the augered sample.

Samples were analyzed by STL Laboratories of Canton, Ohio for VOCs using U.S. EPA Method 8260, SVOCs using U.S. EPA Method 8270, and RCRA metals using U.S. EPA Methods 6010

and 7471 (for mercury). Sample results were compared to New York State Department of Environmental Conservation (NYSDEC) Recommended Cleanup Goals (RCGs) and U.S. EPA Region IX Preliminary Remediation Goals (PRGs) for residential soil (direct contact pathway). The NYSDEC RCGs take into account a direct contact pathway and protection from leaching to groundwater. The U.S. EPA Region IX PRGs are commonly used for guidance when reviewing analytical results. Even though the Site has historically been used for commercial purposes, the data were compared to residential soil screening levels to be conservative.

The sampling and PID screening results for the former hazardous waste storage area are summarized on Table 1. The laboratory analytical report is included as Appendix B. Low levels of one or more VOCs (i.e., most results were below the laboratory reporting limits) were detected in all samples; however, most results were flagged by the laboratory as having the analytes present in the method blanks, which likely explains the analyte being detected in the samples. In addition, the analysis of the trip blank identified the presence of four VOCs, including methylene chloride, which was detected in 3 of the 4 samples collected from the former hazardous waste storage area. No VOCs were detected at concentrations above NYSDEC RCGs or Region IX PRGs. Low levels of SVOCs were detected in all samples; however, all results were below the laboratory reporting limits. Benzo(a)pyrene was detected above the NYSDEC RCG (61 ppb) and Region IX PRG (62 ppb) in sample BV-HZ2-11306 (120 ppb). The detection of benzo(a)pyrene at BV-HZ2-11306 is not considered to be a concern as it was below the laboratory reporting level and was non-detect in all other samples collected. No other SVOCs were detected at concentrations above NYSDEC RCGs or Region IX PRGs. Low ppm levels of metals were detected in all samples; with arsenic, barium, cadmium, chromium, and lead present in each sample. The laboratory flagged all cadmium results to indicate that the analyte was present in method blanks, which may explain the analyte being detected in the samples. Arsenic levels in all samples were above the Region IX PRG of 0.39 mg/kg; however, the levels are all below the NYSDEC RCG of 7.5 mg/kg. It should be noted that the Region IX arsenic PRG is below typical soil background levels.

2.3 Inspection of the ACM Locations

ACM identified during the Phase I ESA was present at the facility during the Phase II site inspection. Ethan Allen removed or repaired the ACM in May and June 2007. The work is described in Section 3.

2.4 Inspection of AST Staging Areas

The inactive ASTs identified during the Phase I ESA had been removed from the property. An inspection of the AST staging areas did not identify stained soil, stained concrete, or other visual evidence of impact from the AST staging.

2.5 Inspection of the Oil/Water Separator

The oil/water separator for the boilers had been decommissioned and removed from the concrete pit adjacent to the boiler room where it had been previously located. An inspection of the pit did not identify the presence of oil or staining of the concrete. The concrete was in good condition, with no cracks or openings identified. Approximately 6 inches of standing water was present in the pit. The water was clear and did not prohibit a thorough inspection of the pit bottom.

2.6 Sampling of the Former Empty Chemical Drum Storage Area

Four soil samples were collected from the area west of the facility where empty chemical drums were staged prior to removal for re-use or recycling (see Figure 2). Samples were collected using a hand auger and VOC encore sampler from 6 to 12 inches below the existing ground surface. Sampling equipment was decontaminated with a non-phosphate detergent wash and deionized water rinse prior to beginning the sampling activity and after each sample was collected. Samples are identified as BV for the Boonville location, DS1 through DS4 for drum storage area samples, and include the sample collection date. A photograph was obtained of the sample location area and is presented in the photograph log included as Appendix A. Sample

locations were screened with a photoionization detector (PID) immediately after removing the augered sample. Quality control (QC) samples were collected to determine the reproducibility of analytical results and allow the laboratory to determine the accuracy and precision of the analytical techniques. For the former empty drum storage area, QC sampling consisted of a matrix spike/matrix spike duplicate (MS/MSD) sample at location DS4.

Samples were analyzed by STL Laboratories of Canton, Ohio for VOCs using U.S. EPA Method 8260, SVOCs using U.S. EPA Method 8270, and RCRA metals using U.S. EPA Methods 6010 and 7471 (for mercury). Sample results were compared to NYSDEC RCGs and U.S. EPA Region IX PRGs for residential soil (direct contact pathway).

The sampling and PID screening results for the former empty chemical drum storage area are summarized on Table 2. The laboratory analytical report is included as Appendix B. Very low levels (i.e., below the laboratory reporting limit) of one VOC (1,4-dichlorobenzene) were detected in all samples; however, all results were flagged by the laboratory as having the analyte present in the method blanks, which likely explains the analyte being detected in the samples. In addition, the analysis of the trip blank identified the presence of two VOCs, acetone and 2-butanone. No VOCs were detected at concentrations above NYSDEC RCGs or Region IX PRGs. Low levels of one SVOC (bis(2-ethylhexyl)phthalate) were detected in all samples; however, all results were below the laboratory reporting limits. No SVOCs were detected at concentrations above NYSDEC RCGs or Region IX PRGs. Low ppm levels of metals were detected in all samples; with arsenic, barium, cadmium, chromium, lead, and mercury present in each sample. However, the laboratory flagged all cadmium and mercury results to indicate that the analytes were present in method blanks, which may explain the analytes being detected in the samples. There were no sample results above the NYSDEC RCGs for any constituent. Arsenic levels in all samples were above the Region IX PRG of 0.39 mg/kg; however, the levels are all below the NYSDEC RCG of 7.5 mg/kg. It should be noted that the Region IX arsenic PRG is below typical soil background levels.

2.7 Sampling of the Former UST Locations

A UST was located at the west side of the main facility near Boiler House No. 5 and at the west side of the materials storage building, designated Building No. 12 (see Figure 2). Two borings were advanced to refusal at each former UST location, approximately 5 to 8 feet below ground surface. Soil samples were collected from the material removed just prior to auger refusal. A total of four soil samples were collected. Sampling equipment was decontaminated with a non-phosphate detergent wash and deionized water rinse prior to beginning the sampling activity and after each sample was collected. Samples are identified as BV for the Boonville location, UST11 and UST12 for location one near the materials storage building, samples 1 and 2, and UST21 and UST22 for location 2 near the boiler house, samples 1 and 2, and include the sample collection date. Photographs of the sample locations are presented in the photograph log included as Appendix A. Sample locations were screened with a PID immediately after the soil was removed by the drilling auger.

Samples were analyzed by STL Laboratories of Canton, Ohio for VOCs using U.S. EPA Method 8260, SVOCs using U.S. EPA Method 8270, RCRA metals using U.S. EPA Methods 6010 and 7471 (for mercury), and total petroleum hydrocarbons (TPH) using U.S. EPA Method 8015. Sample results for VOCs, SVOCs, and metals were compared to NYSDEC RCGs and U.S. EPA Region IX PRGs for residential soil (direct contact pathway). Sample results for TPH were compared to residential soil cleanup goals for Massachusetts and Connecticut since NYSDEC prefers to compare VOC and SVOC constituents of petroleum hydrocarbons to VOC and SVOC RCGs.

The sampling and PID screening results for the former UST locations are summarized on Table 3. The laboratory analytical report is included as Appendix B. Very low levels (i.e., most results below laboratory reporting limits) of VOCs were detected in all samples; however, results for acetone, 1,4-dichlorobenzene, methylene chloride, and 1,2,4-trichlorobenzene were flagged by the laboratory as having the analytes present in the method blanks, which likely explains the analytes being detected in the samples. The trip blank was non-detect for all constituents. No

VOCs were detected at concentrations above NYSDEC RCGs or Region IX PRGs. SVOCs were detected in all samples; however, many results were below the laboratory reporting limits. Sample BV-UST11-103006 contained concentrations of benzo(a)anthracene (970 ug/kg), benzo(a)pyrene (780 ug/kg), benzo(b)fluoranthene (690 ug/kg), chrysene (920 ug/kg), and dibenzo(a,h)anthracene (210 ug/kg) above NYSDEC RCGs or Region IX PRGs. Sample BV-UST12-103006 contained concentrations of benzo(a)anthracene (380 ug/kg), benzo(a)pyrene (280 ug/kg), and dibenzo(a,h)anthracene (70 ug/kg) above NYSDEC RCGs or Region IX PRGs. Sample BV-UST22-103006 contained a concentration of benzo(a)pyrene (99 ug/kg) above the NYSDEC RCG and the Region IX PRG. Metals were detected in all samples; with arsenic, barium, cadmium, chromium, and lead present in each sample. The laboratory flagged all antimony, cadmium, and mercury results to indicate that the analytes were present in method blanks, which may explain the analytes being detected in the samples. Samples BV-UST11-103006 and BV-UST12-103006 contained lead at 170 mg/kg and 304 mg/kg, respectively. The Region IX PRG for lead is 400 mg/kg. The NYSDEC RCG for lead is background, which NYSDEC lists generally as 4 to 61 mg/kg for areas that are primarily rural and not adjacent to a major highway. Arsenic levels in all samples were above the Region IX PRG of 0.39 mg/kg; however, the levels are all below the NYSDEC RCG of 7.5 mg/kg. It should be noted that the Region IX arsenic PRG is below typical soil background levels.

Low levels of TPH (i.e., below the laboratory reporting limit) were detected in all but one sample. The higher concentration was detected in sample BV-UST22-103006, which had a result of 880 ppm. The laboratory flagged all results to indicate that the analyte was present in method blanks, which may explain the analyte being detected at low levels in most of the samples.

2.8 Soil and Groundwater Sampling for the Wood Chip Disposal Area

In October and November 2006 six borings were advanced at the perimeter of the wood chip disposal area. In addition, three borings were advanced through the wood chip disposal area to determine the depth of the wood chips. The wood chip depth was used to ensure that soil and groundwater samples were collected at an elevation below the bottom elevation of the wood

chips. Figure 3 shows the boring locations. A soil sample was collected from each boring at the approximate level where groundwater was identified. Temporary monitoring wells were installed in the six borings. The temporary monitoring wells were constructed of 1-inch diameter PVC pipe with 5-foot PVC, no. 10 slot screen sections. Following installation, the wells were purged until dry and allowed to recover overnight. Groundwater samples were collected using a low flow peristaltic pump. During sampling, field parameters, including pH, temperature, conductivity, and turbidity, were measured. The water level was obtained at each well. Once groundwater samples were collected, the temporary wells were removed and the borings abandoned by placing bentonite pellets into the boring and filling the remaining annular space with drill cuttings. Based on the groundwater elevations, groundwater flow is to the southeast toward a wetland area and surface water discharge beneath the Penn Central Railroad tracks (see Figure 3).

Soil and groundwater sampling equipment was decontaminated with a non-phosphate detergent wash and deionized water rinse prior to beginning the sampling activity and after each sample was collected. Samples are identified as BV for the Boonville location, WP1 through WP5 for soil samples and MW1 through MW6 for groundwater samples, and include the sample collection date. Photographs of typical soil and groundwater sampling activities are presented in the photograph log included as Appendix A. Soil sample locations were screened with a PID immediately after the soil was removed by the drilling auger. Quality control (QC) samples were collected to determine the reproducibility of analytical results and allow the laboratory to determine the accuracy and precision of the analytical techniques. For the wood chip disposal area, QC sampling consisted of a duplicate soil sample at location WP2 and a matrix spike/matrix spike duplicate (MS/MSD) groundwater sample at location MW6. The duplicate sample results (WP2Dup) compared favorably with the WP2 sample results with the exception of bis(2-ethylhexyl)phthalate, the one SVOC detected in either sample. Bis(2-ethylhexyl)phthalate was not detected in the sample from WP2, but was detected at 210 ug/kg in WP2Dup (see Table 4).

Soil and groundwater samples were analyzed by STL Laboratories of Canton, Ohio for VOCs using U.S. EPA Method 8260, SVOCs using U.S. EPA Method 8270, and RCRA metals using

U.S. EPA Methods 6010 and 7471 (for mercury). Soil sample results were compared to NYSDEC RCGs and U.S. EPA Region IX PRGs for residential soil (direct contact pathway). Groundwater sample results were compared to NYSDEC RCGs for Class GA waters (best use) and Region IX PRGs for tap water. Due to the lack of productivity from temporary monitoring wells MW2, MW4, and MW5, only VOCs were analyzed for MW2 and MW5 and VOCs and metals were analyzed for MW4. A soil sample was not collected from the MW6 location due to miscommunication with the drilling subcontractor. The drilling subcontractor drilled the boring and completed the temporary well installation without allowing a soil sample to be collected.

The sampling and PID screening results for the wood chip disposal area soil samples are summarized on Table 4. The sampling and field parameter results for the wood chip disposal area groundwater samples are summarized on Table 5. Soil sample elevations and groundwater elevations are summarized on Table 6. The laboratory analytical report is included as Appendix B.

Low levels (i.e., all soil and most groundwater results were below the laboratory reporting limits) of VOCs were detected in soil and groundwater samples; however, acetone results for soil and groundwater samples and 1,4-dichlorobenzene results for soil samples were flagged by the laboratory as having the analytes present in the method blanks, which likely explains the analytes being detected in the samples. Groundwater samples BV-MW1-11206 and BV-MW5-11206 contained concentrations of benzene above the Region IX PRG (0.62 ug/kg and 0.50 ug/kg, respectively) and groundwater sample BV-MW2-11206 contained a benzene concentration of 1.0 ug/kg, which is equal to the NYSDEC RCG and above the Region IX PRG. The trip blank for sample locations WP1, WP2, and WP3 was non-detect for all constituents. The analysis of the trip blank for sample locations WP4 and WP5 identified the presence of two VOCs, acetone and 2-butanone.

Low levels (i.e., below the laboratory reporting limit) of one SVOC (bis(2-ethylhexyl)phthalate) were detected in 2 of 5 soil samples. Very low levels (i.e., below the laboratory reporting limit) of two SVOCs were detected in the three groundwater samples analyzed for SVOCs; however, bis(2-ethylhexyl)phthalate results were flagged by the laboratory as having the analyte present in

the method blanks, which likely explains the analyte being detected in the samples. No SVOCs were detected in soil or groundwater samples at concentrations above NYSDEC RCGs or Region IX PRGs.

Low levels (i.e., all groundwater and most soil results were below the laboratory reporting limit) of metals were detected in soil and groundwater samples; however, the laboratory flagged all groundwater metal results to indicate that the analytes were present in method blanks, which may explain the analytes being detected in the samples. The laboratory flagged antimony, cadmium, and mercury results for soil samples to indicate that the analytes were present in method blanks, which may explain the analytes being detected in the samples. There were no sample results above the NYSDEC RCGs for any constituent. Arsenic levels in all soil samples were above the Region IX PRG of 0.39 mg/kg; however, the levels are all below the NYSDEC RCG of 7.5 mg/kg. It should be noted that the Region IX arsenic PRG is below typical soil background levels. Turbidity levels were elevated (i.e., above 100 NTUs) in all but one of the groundwater samples. The elevated turbidity may explain the presence of metals in the samples.

In May 2007 a monitoring well was installed downgradient of the former wood chip disposal area to confirm groundwater sample results obtained during the Phase II Assessment, i.e., detections of benzene above NYSDEC RCGs and Region IX PRGs. The well was installed using a hollow stem auger drill rig. The well was constructed of 2-inch diameter PVC pipe and PVC screen with threaded connections. The total well depth is 15 with 10 feet of no. 10 slot screen from 5 to 15 feet below ground surface. The water table is at 6.2 feet below ground surface. The monitoring well location is shown on Figure 3.

Sampling of the well occurred on May 22, 2007, approximately two weeks after well installation. Prior to sample collection, three well volumes were purged and groundwater field parameters (pH, temperature, and conductivity) were monitored until stable readings were obtained. The groundwater elevation at the time of sample collection was 1,122.75 feet above mean sea level. The sample was collected with a low flow peristaltic pump. The groundwater sample was analyzed by STL Laboratories of Canton, Ohio for VOCs using U.S. EPA Method 8260, SVOCs using U.S. EPA Method 8270, and RCRA metals using U.S. EPA Methods 6010 and 7471 (for

mercury). VOCs were not detected in the sample. One SVOC, bis(2-ethylhexyl)phthalate, was detected at the very low level (i.e., below the laboratory reporting limit) of 1.7 ppb; however, the result was flagged by the laboratory as having the analyte present in the method blank, which likely explains the analyte being detected in the sample. One metal, barium, was detected at the low level (i.e., below the laboratory reporting limit) of 39.1 ppb; however, the result was flagged by the laboratory as having the analyte present in the method blank, which likely explains the analyte being detected in the sample. The laboratory analytical report is included as Appendix C.

3.0 ACM AND SOIL REMOVAL ACTIVITIES

The ACM and soil removal activities began the week of May 14, 2007 and were completed the week of June 18, 2007. The scope of work included the following:

- Removal or repair of ACM within the facility buildings
- Excavation and offsite disposal of soil from the two former UST areas

3.1 ACM Removal and Repair

Ethan Allen retained AAA Environmental, Inc. (AAA) of Syracuse, New York to conduct the ACM removal and repair work. The ACM was piping insulation located within the former manufacturing portion of the facility. A description of the work conducted and work locations are provided below:

- Kiln Area – 100 lineal feet of pipe insulation removed
- Finishing Area – 185 lineal feet of pipe insulation removed
- Pipe Bridge – 195 lineal feet of pipe insulation removed
- Boiler House – 20 lineal feet of pipe insulation removed
- Cabinet Department – 540 lineal feet of pipe insulation repaired

The removed ACM was disposed at Steuben County Landfill in Bath, New York. In accordance with New York State asbestos regulations, AAA received a variance to allow the repair work for the 540 lineal feet of pipe insulation in the former Cabinet Department. A variance is required to leave known ACM in place within a structure. The repaired asbestos pipe insulation was marked with fluorescent orange paint to alert facility occupants to the presence of ACM.

As required by New York State asbestos regulations, an independent entity was retained to perform air monitoring and project monitoring during the ACM removal and repair work. Ethan Allen retained QES Churchill Environmental, Inc. (QES) to perform the air monitoring and project monitoring. QES collected a total of 212 background and real-time air samples during

the project and was on site full-time to monitor AAA's performance of the ACM work. The air sampling results confirmed that the ACM removal was performed in accordance with New York State Department of Labor regulations for asbestos work. The QES monitoring logs and laboratory report for the air samples are included in Appendix D.

3.2 Former UST Locations Soil Removal

Ethan Allen retained AAA to perform soil excavation at the two former UST locations (see Figure 2). AAA removed approximately 60 cubic yards of soil from the former UST location near Building No. 12 and approximately 65 cubic yards of soil from the former UST location near Boiler House No. 5. All soil above bedrock was removed. Bedrock is approximately 4 feet below ground surface (bgs) at the former UST location near Building No. 12 and 3 feet bgs at the former UST location near Boiler House No. 5. The areal limits of excavation were based on visual inspection during the work and historical information on where the former tanks were located. Photographs of the excavated areas are presented in the photograph log included as Appendix A. The excavated soil was staged on, and covered with, polyethylene sheeting until characterization of the soil for offsite disposal. The soil was disposed at Oneida-Herkimer Solid Waste Management Authority Landfill in Ava, New York.

Confirmation samples were collected by AAA after the excavation limits had been achieved. Since the excavation depth was to bedrock, a bottom sample could not be obtained; therefore, confirmation samples were collected from the four excavation sidewalls. A five-point composite sample was obtained from each excavation sidewall for a total of eight confirmation samples from the two former UST locations. Samples were identified by site and by number; site 1 is the former UST location near Building No. 12 and site 2 is the former UST location near Boiler House No. 5. The samples were numbered one through four for each site to correspond to the four sidewalls of each excavation.

Samples were analyzed by Life Science Laboratories, Inc. of Syracuse, New York for VOCs using U.S. EPA Method 8260, SVOCs using U.S. EPA Method 8270, RCRA metals using U.S. EPA Methods 6010 and 7471 (for mercury), and total petroleum hydrocarbons (TPH) using U.S.

EPA Method 8015. As with the sample results obtained during the Phase II investigation, confirmation sample results for VOCs, SVOCs, and metals were compared to NYSDEC RCGs and U.S. EPA Region IX PRGs for residential soil (direct contact pathway) and confirmation sample results for TPH were compared to residential soil cleanup goals for Massachusetts and Connecticut.

The confirmation sample results for the former UST locations are summarized on Table 7. The laboratory analytical report is included as Appendix E. VOCs were not detected in any confirmation sample. SVOCs were detected in all samples from the former UST location near Building No. 12 and 2 of 4 samples from the former UST location near Boiler House No. 5. As with the sample results obtained during the Phase II Assessment, five SVOCs were identified at concentrations above NYSDEC RCGs and Region IX PRGs, including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and dibenzo(a,h)anthracene. Metals were detected in all samples; with arsenic, barium, chromium, and lead present in each sample. One sample from the former UST location near Boiler House No. 5 had arsenic at 10 ppm, above the NYSDEC RCG of 7.5 ppm (Region IX PRG of 0.39 ppm), and chromium at 11 ppm, above the NYSDEC RCG of 10 ppm (Region IX PRG of 30 ppm). All other metal detections were below NYSDEC RCGs and Region IX PRGs. Low levels of TPH in the form of diesel related organics were detected in all confirmation samples. The TPH concentrations were not above the residential soil cleanup goals for Massachusetts and Connecticut that are used for comparison.

After achieving the excavation limits and collecting the confirmation samples, AAA backfilled the excavations. Clean fill material was imported, placed in the excavations in lifts and compacted. Gravel was used for the top 8 inches of backfill to provide a surface suitable for vehicular traffic.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions are drawn from the Phase II Environmental Site Assessment and ACM and soil removal activities:

- Based on the site inspection, no further investigation or action is required in the finishing material storage area, lacquer storage area, and spray booth areas.
- Based on the site inspection, no further investigation or action is required in the oil/water separator and former AST staging areas.
- Based on the soil sample results, no further investigation or action is required at the former hazardous waste storage area.
- Based on the soil sample results, no further investigation or action is required at the former empty chemical drum storage area.
- Based on the removal and repair activities, ACM at the facility has been addressed and no further action is required.

EMI offers the following recommendations based on the Phase II Environmental Site Assessment and ACM and soil removal activities:

- Collect an additional groundwater sample from the well downgradient of the former wood chip disposal area to confirm that impact is not present in groundwater.
- Further evaluate the SVOC impact at the former UST locations. For the former UST location adjacent to the materials storage building, Building No. 12, discussions with Ethan Allen personnel revealed that the area was previously occupied by buildings and structures. The previous operations associated with the buildings and structures may have contributed to the presence of SVOC and metal constituents.

5.0 REFERENCES

Connecticut Department of Environmental Protection, Direct Exposure Criteria for Soil, Regulation 22a-133k-1, Appendix A, January 30, 1996, http://www.ct.gov/dep/lib/dep/regulations/22a/22a-133k-1through3.pdf.

Engineering Management, Inc., Environmental Site Assessment, Former Ethan Allen Boonville Division, September 2004.

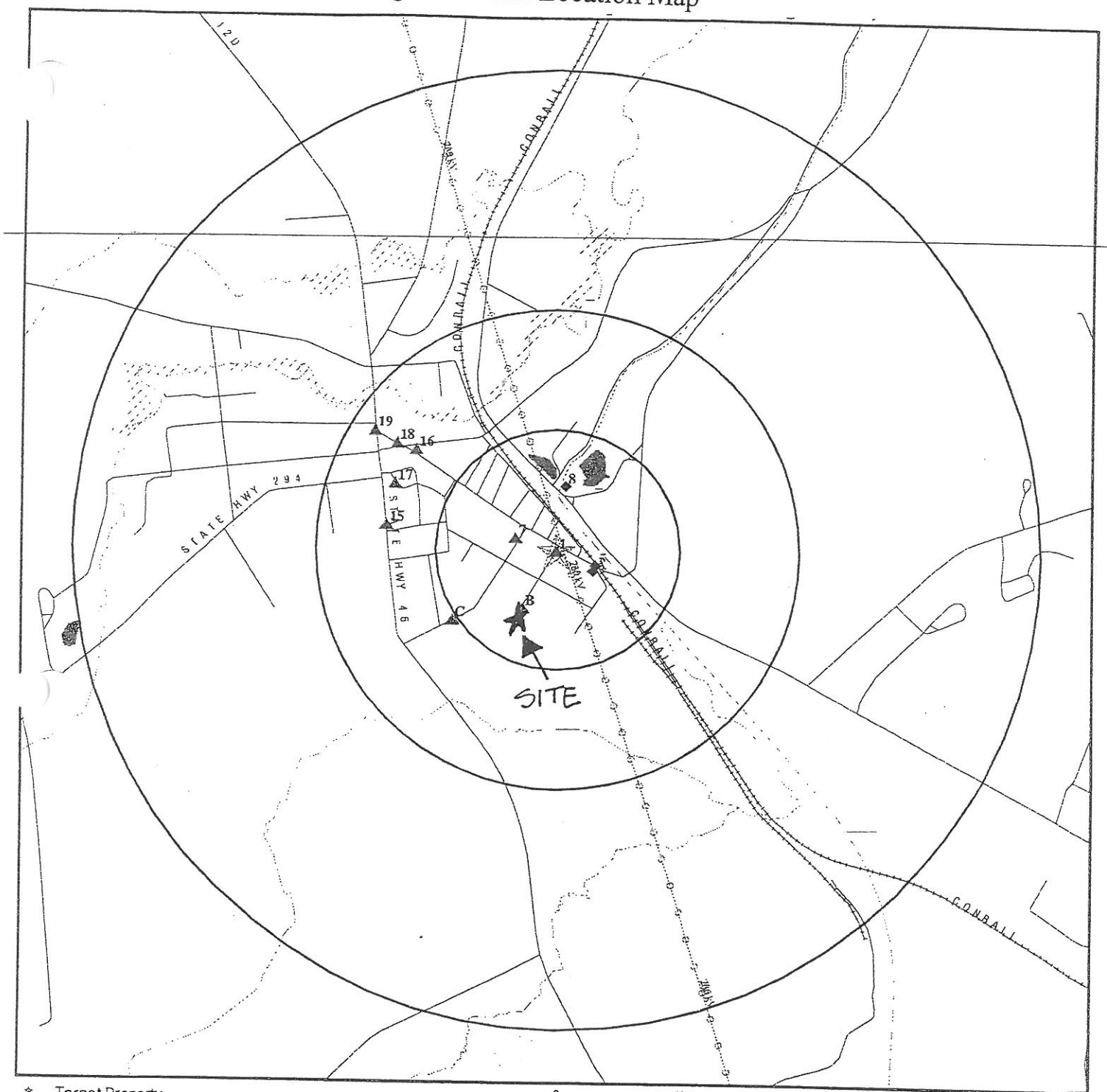
Massachusetts Department of Environmental Protection, Massachusetts Contingency Plan, Subpart P: Massachusetts Oil and Hazardous Material List, 310 CMR 40, January 1995, http://mass.gov/dep/service/regulations/310cmr40.pdf.

New York State Department of Environmental Conservation, Determination of Soil Cleanup Objectives and Cleanup Levels, Technical and Administrative Guidance Memorandum No. 4046, January 24, 1994, http://www.dec.ny.gov/regulations/2612.html.

New York State Department of Environmental Conservation, 6 NYCRR Part 703, Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations, August 1999, http://www.dec.ny.gov/regs/4590.html.

U.S. EPA, Region IX Preliminary Remediation Goals, October 2004, http://www.epa.gov/region09/waste/sfund/prg/files/04prgtable.pdf.

Figure 1 – Site Location Map



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Coal Gasification Sites
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Federal Wetlands
- State Wetlands

TARGET PROPERTY:	Ethan Allen, Inc.
ADDRESS:	Grove St.
CITY/STATE/ZIP:	Boonville NY 13309
LAT/LONG:	43.4810 / 75.3287