# DRAFT ANALYSIS OF BROWNFIELDS CLEANUP ALTERNATIVES

Former Nu-Style Property 87 Grove Street, Franklin, MA DEP Release Tracking No.2-0016694

December 2016

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# **List of Attachments**

Attachment A: List of Environmental Documents

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#### 1.0 Introduction

The Town of Franklin has prepared this Draft Analysis of Brownfields Cleanup Alternatives (ABCA) report for the Town-owned property known as the former Nu-Style property at 87 Grove Street in Franklin, Massachusetts (the site). <u>Figure 1 on the next page</u> is a map showing the site's location (Assessor's Map Number 276, Lot 022, 0.825 acre). This ABCA has been prepared in accordance with USEPA guidelines and in general accordance with the regulatory requirements of the Massachusetts Contingency Plan (MCP), 310 CMR 40.0.

This ABCA presents an evaluation of feasible remedial alternatives to address chlorinated volatile organic compound (VOC) contamination in soil and groundwater, and hazardous building materials including lead and asbestos. The goal of this project is to complete remedial and assessment response actions in order to prepare the site for redevelopment.

In accordance with USEPA guidelines, the Draft ABCA is available for public comment. A public meeting on the Draft ABCA will be held on Tuesday December 6, 2016 at 5:00 p.m., in the Town Council Chambers at 355 East Central Street, Franklin MA.

# 1.1 Summary of Operational History and Current Use of Site

The former Nu-Style manufacturing complex site has a long manufacturing history (at least 90 years), including textiles and costume jewelry. Materials used and stored at the site associated with jewelry manufacturing include cyanides, metals, chlorinated solvents, and petroleum products. Additional substances associated with textile manufacturing were also likely used.

Town files indicate that the main portion of the building was constructed circa 1945. The building was historically occupied by Unionville Woolen Mills, Franklin Paint Company, and was most recently occupied by Nu-Style Company and Image Jewelry.

The building is currently vacant, dilapidated, and presents a potential risk to public safety and health hazard to the residents in the area. The former manufacturing facility (Nu-style Building II) was condemned in 2005, and is vacant, dilapidated, blight on the neighborhood, and presents a risk to public health and safety.

# 1.2 Reason for Proposed Remediation Project

Since 2006 the Town of Franklin Massachusetts has performed substantial assessment and remediation activities at the former Nu-Style manufacturing property. This work included completion of several Phase I and Phase II Environmental Site Assessment reports, demolition of the larger of two former manufacturing buildings (Building I), and partial remediation of contaminated soils.

Assessment activities completed at the site document levels of chlorinated volatile organic compounds and lead in groundwater; and chlorinated volatile organic compounds, metals, and polycyclic aromatic hydrocarbon compounds in the soil. The concentrations of these compounds of concern reported in soil and groundwater exceed Massachusetts Department of Environmental Protection (DEP) standards for the protection of human health and the environment. The presence of compounds of concern at the reported concentrations in these environmental media requires response actions to mitigate risk to human health and the environment. Until remediation response actions are completed, the site cannot achieve compliance with the Massachusetts Contingency Plan (310 CMR 40.0000), Massachusetts Department of Environmental Protection requirements, and on-going risk to human health and the environment will remain.

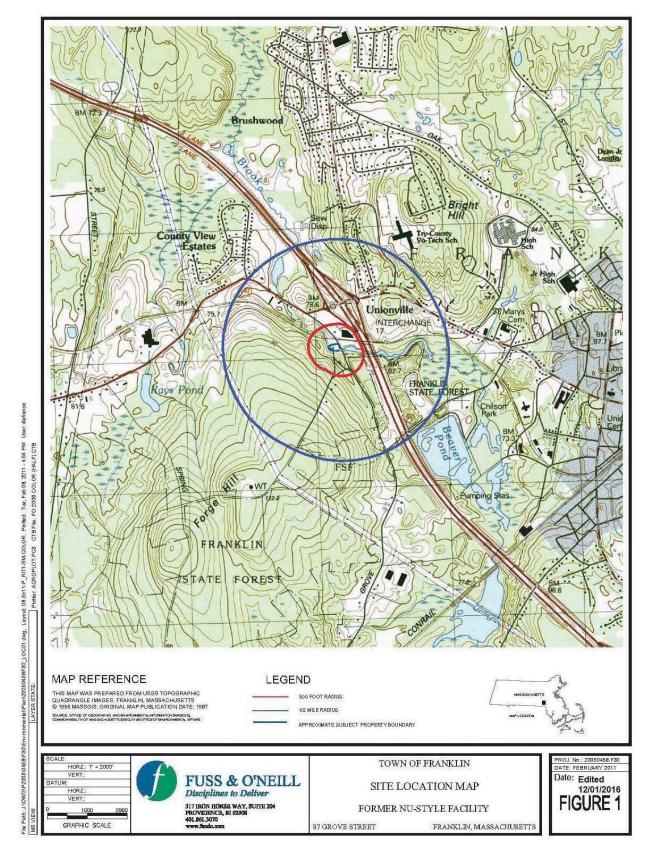


Figure 1 - USGS Topographic

# 1.3 Alternatives for Site Redevelopment

The Town realizes there is a limited number of potential uses for the site due to the relatively small size of the parcel, as well as adjacent Mine Brook, which impacts any large scale development plans. Environmental site assessment work over the last ten years has enabled the Town to clarify which redevelopment options are the most feasible and therefore are more likely to occur. Several scenarios for redevelopment of the property have been considered; all feasible options involve the Town eventually selling the property through an RFP process. It is the hope of the Town to sell the property, even if not at a profit to improve an area of Town that would otherwise continue to negatively impact the surrounding area.

The Town has had regular communications with several adjacent property owners regarding the Nu-Style property remediation and reuse. These communications came about in a number of ways including previous public hearings and redevelopment workshops, as well as meetings with specific property owners with an interest in purchasing the Town's property, or possible lease agreements and easements. At least three adjacent property owners have expressed interest in purchasing the property in recent years. Eventual purchasing of the Town's former Nu-Style property by one or more of these adjacent property owners is likely. Below are a few possible reuse alternatives for the property:

- Use of the Town's property to construct an access road to a 9.3+ acre undeveloped business-zoned parcel to the west;
- Use of the site by a company (World Marble & Granite) just to the north for expansion of their outdoor display area, customer parking, and construction of a showroom (possibly in the location of Building II).
- Redevelop the site with a new small office or retail building, and associated parking.

# 1.4 Applicable Laws & Regulations

Laws and regulations applicable to remedial and assessment response actions include the MCP (310 CMR 40.0000), Massachusetts Hazardous Waste Regulations (310 CMR 30.0), Toxic Substance Control Act (TSCA) Regulations, Federal Small Business Liability Relief and Brownfields Revitalization Act, the Federal Davis-Bacon Act, and Town of Franklin by-laws. Contaminated soil and groundwater at the site will be regulated under the MCP. It is anticipated that remedial response actions (involving soil and / or ground water) will be performed as a Release Abatement Measure (RAM) under RTN 2-0016694.

#### 2.0 General Disposal Site Information

# 2.1 Disposal Site History

In 2002 and 2005 the Town of Franklin obtained by foreclosure via tax title two parcels (Assessor's Map 276, Lots 022 and 027) at 87 Grove Street known as the former Nu-Style property. When acquired, the two parcels (totaling 53,190 sf [1.22+/- acres]) each contained a former industrial building. Both buildings were condemned in October 2005. The two buildings were once part of a larger mill complex that contained as many as six buildings.

The larger of the two buildings (Building I), which was a two-story building with a footprint of 12,046+/- sf, was demolished by the Town in 2012 as part of an EPA funded brownfields remediation project.

The remaining Town owned building (Building II) is adjacent to Mine Brook on the west side of the property. Originally built in 1945 the building has had at least two additions, one of which joined Building II to an adjacent former Nu-Style building, which is currently privately owned. The former manufacturing facility is a 4,000+ sf one and one-half story building, which is dilapidated, unsafe, blight on the neighborhood, and presents a risk to public health and safety. In 2014 substantial portions of the building collapsed; at that time the site was fenced to limit exposure and enhance safety.

The site had a long manufacturing history (at least 90 years), including textiles and costume jewelry. The buildings were historically occupied by Norfolk Woolen Mills, Unionville Woolen Mills, Franklin Paint Company, and most recently by Nu-Style Company and Image Jewelry. Materials used and stored at the site associated with jewelry manufacturing include cyanides, metals, chlorinated solvents, and petroleum products. Additional substances associated with textile manufacturing were also likely used. Use of oil and hazardous materials ceased at the property in 1989.

Starting in 2006 the Town worked to assess, remediate and redevelop the property. A substantial amount of assessment activities have been conducted to characterize the nature and extent of releases and hazardous building materials at the Town owned Nu-Style Property. The primary environmental concerns at the site are as follows:

- Chlorinated volatile organic compounds (VOC) including Trichloroethylene (*TCE*) and perchloroethylene (*PCE*) in shallow overburden groundwater
- Chlorinated VOC in groundwater in the bedrock aquifer
- Polycyclic aromatic hydrocarbon (PAH) compounds in soil
- PAH compounds in sediment
- Hazardous building materials including lead and asbestos in the building structures.

The assessment activities mentioned above showed that the majority of the Town's Nu-Style property to the south of Mine Brook was "primarily used for parking and available documentation indicates that no industrial processes occurred on this portion of the Site". Franklin's LSP, Tata & Howard, completed a related assessment document, *Permanent Solution with Conditions - Partial*, in October 2015. The Town's LSP "is of the opinion that a condition of No Significant Risk has been achieved at the Property. The sources of the release, which are the former manufacturing operations at other areas of the Site, have been terminated and the concentrations of CVOCs in the monitoring wells... have been reduced to background" levels. In addition, an Activity and Use Limitation is not required to maintain the condition of No Significant Risk.

For these reasons the Town decided to separate the relatively clean portion of the property south of Mine Brook from the rest of the former manufacturing property. In December 2015 the Town submitted a plan to Franklin Planning Board for endorsement, which changed the

boundaries of lots 022 and 027, created one parcel south of Mine Brook (17,267+/- sf) and a second parcel (35,923+/- sf) mostly north of Mine Brook (see ANR Plan in Attachment C).

In 2016 Franklin's Assessors reassessed the properties since the parcels changed shape in December 2015. The parcel south of Mine Brook (parcel 276-027-000) noted as Lot 2 on the ANR Plan does not require additional assessment or remediation; during 2016 the Town advertised a request for bids for the sale and reuse of the parcel. An adjacent property owner has since purchased the parcel and will utilize Parcel 276-027-000 for parking.

The remainder of the Town's former Nu-Style property (Parcel 276-022-000 highlighted in yellow in Figure 2 below (and noted on the ANR Plan as Lot I) is the subject of this ABCA and the proposed 2017 EPA Brownfields Cleanup Project; this property includes all of the former Lot 22, and more than half of the former Lot 27.

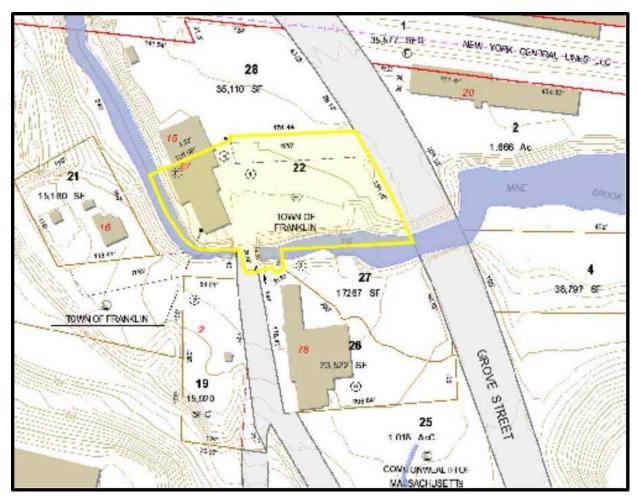


Figure 2. Parcel 276-022-000. Location of Proposed Remediation Project.

#### 2.2 Remedial Response Actions Completed

During 2006 and 2008 the Town of Franklin in partnership with Norfolk County and their Licensed Site Professional (LSP) contractor conducted Phase I and Phase II assessments of the site. The work was performed using EPA grant funding. The assessment activities between 2006 and 2008 included sediment samples, surface water samples, soil samples, and three groundwater monitoring events.

The majority of contamination at the Nu-Style property was found to be primarily north of Mine Brook, adjacent to and within the footprint of Building I, and was the focus of the majority of previous assessment and remediation work, which included demolition of Building I and removal of over 500 tons of contaminated soil and other materials. For those reasons the focus of the Town's Phase II assessment activities since 2008 has been on the eastern two-thirds of the parcel. However, at least some of the more recent sampling was performed on the western one-third of the parcel and location of the remaining building (Building II). Phase I and Phase II environmental assessment activities performed that include portions of Parcel 276-022-000 near Building II Include the following:

- Phase I Environmental Site Assessments developed in May 2006, January 2007, and May 2008;
- Phase II Environmental Site Assessment developed in September 2007, with Addendums in February 2008 and July 2009; and
- Phase II Site Assessment Report developed in September 2010.

The documents show that chlorinated VOC are present in shallow soil to the east of Building II, and in overburden groundwater to the northeast, east, and south of the building. PAH compounds were detected in shallow sediment in one isolated area of Mine Brook to the west of the site. Collectively the reports do not identify the full extent of groundwater hazardous chemical contamination. The Phase II Comprehensive Site Assessment (CSA) standard requires that the full nature and extent of a disposal site be characterized. Additional Site Assessment activities are necessary in order to characterize soil and groundwater at the site, but due to the dilapidated nature of Building II, these activities cannot be completed until the building is demolished. Attachment A is a list of related environmental documents.

Results of Passive Soil Gas Survey, March 2015. During the first three months of 2015 the Town's LSP conducted a passive soil gas analysis in order to evaluate whether additional sources of contamination are present, and to identify the ideal location for additional ground water monitoring wells. A total of 42 passive soil gas samplers were installed across the site and abutting properties. The results of the study (see Attachment B) show



Figure 3. Photo of former Nu-Style structure requiring demolition (Building II)

# 2.3 Additional Required Phase II ESA Activities

Even with the substantial Phase II assessment activities performed to date, the nature and extent of releases at the site have not been fully delineated. The number and location of sampling points (soil borings, and monitoring wells) have not been sufficient to characterize the site. The data is both representative and usable to characterize the majority of the disposal site, but there are two important exceptions:

- 1. The area of the site within the footprint of Building II has not been characterized.
- 2. The portion of the parcel near the Old Grove Street Bridge, and on adjacent privately owned property just south south-west of the site.

Therefore soil sampling and monitoring wells are needed directly adjacent to and within the footprint of Building II, as well as north and south of the Old Grove Street Bridge that spans Mine Brook. To fully assess the property's soil and groundwater contamination, Building II needs to be removed. Building materials that were suspected to containing hazardous materials were quantified and characterized. As such, asbestos was confirmed to be present, and evidence indicates that lead and PCB-containing materials are presumed to be present in the dilapidated building.

In order to push the brownfields cleanup project forward, in 2015 The Town distributed an Invitation for Bids (IFB) for demolition of Building I. The IFB resulted in several bids from demolition contractors; however the Town did not go through with the demolition project for two reasons:

- 1. The cost of demolition of Building II and off-site disposal of asbestos containing materials was higher than expected.
- 2. Problems with the structural integrity of the privately owned building that is connected to Building II were identified. The adjacent/attached building is owned by World Marble & Granite of 20 Grove Street, Franklin, MA.

Instead of going forward with demolition of Building II the Town hired a structural engineer to assess the adjacent building's structural problems and provide a scope of work and related estimate of needed improvements. The Town received permission to access the adjacent property from the President of World Marble & Granite, Mr. John Neto. The results of the initial structural assessment showed that the Town's building (Building II) cannot be demolished without first designing and implementing structural improvements to World Marble & Granite's adjacent/attached building.

Since that time the Town has reassessed its project approach and potential alternatives. All feasible alternatives include demolition of Building II, and disposal of hazardous building materials. Once the building is removed assessment of soil and groundwater will be possible. This assessment is required to identify the location and estimated amount of contaminated soil to be removed, and characterize the full extent of groundwater hazardous chemical contamination. If the assessment work is not sufficient to fully characterize the extent of contamination, additional monitoring wells may be needed on adjacent properties. Given the high cost of remediation the Town is seeking EPA funding to assist with the site's cleanup.

On December 8, 2015 Franklin Town Council voted to approve Resolution 15-83, which: 1.) Authorized submission of a \$200,000 EPA Brownfields Cleanup grant application for the work required at the Nu-Style property; and 2.) Recognizes the Town's responsibility to provide an additional 20% cost share.

#### 3.0 Identification of Remedial Action Alternatives

#### 3.1 Contaminants of Concern

Contaminants at the Site are primarily chlorinated VOC in shallow overburden groundwater (and likely in groundwater in the bedrock aquifer), chlorinated VOC and PAH compounds in soil, and hazardous building materials including lead and asbestos in the building structure.

#### 3.1.1 Chlorinated VOC

Chlorinated VOC were present in overburden and bedrock groundwater at the site at concentrations greater than the MassDEP RCGW-2 concentrations. During a previous remediation action over 500 tons of contaminated soils were removed from the site. The removal of soil and Natural Attenuation has reduced the risk to health and safety, but actual levels of Chlorinated VOC under Building II are not known.

#### 3.1.2 PAH Compounds

PAH compounds were found in the soil adjacent to Building II and in sediment just north of Mine Brook during Phase II assessment activities

### 3.1.3 Hazardous Building Materials

Hazardous building materials at the Town owned Nu-Style Property include lead and asbestos. A substantial portion of the building has collapsed; all portions of Building II are dilapidated and unsafe to access. Segregation of waste will not be possible and

# 3.2 Remedial Project Objectives

The presence of compounds of concern at the reported concentrations in these environmental media requires response actions to mitigate risk to human health and the environment. Until remediation response actions are completed, the site cannot achieve compliance with the Massachusetts Contingency Plan (310 CMR 40.0000), Massachusetts Department of Environmental Protection requirements, and risk to human health and the environment will remain. The Town is hopeful the EPA Brownfields Cleanup Grant funded remediation project will bring the site to a point where it will once again be a useable parcel attractive to developers.

### 3.3 Remedial Action Alternatives

While developing potential remedial action alternatives two major categories of remediation need to be considered:

- 1. Remediation of hazardous building materials
- 2. Remediation of contaminated soil and groundwater.

The Town has developed remedial action alternatives considering these two major categories, as well as knowledge of slope, natural resources, utilities, abutting properties and other site limitations. As mentioned in previous sections, soil and groundwater at the site, especially within the footprint of Building II, has not been adequately characterized to consider what remedial approaches are most appropriate. However, based on current knowledge of the site one of the remedial alternatives outlined below (or a combination) is likely. The Town has developed the following Remedial Action Alternatives for study and consideration:

Remedial Action Alternative #1: No Action

Remedial Action Alternative #2: Hazardous Building Materials Remediation, and Monitored Natural Attenuation.

Remedial Action Alternative #3: Remediation of Soil and Groundwater Contamination Only

Remedial Action Alternative #4: Remediation of Hazardous Building Materials,

Contaminated Soil and Groundwater

# 4.0 Screening and Evaluation of Remedial Action Alternatives

The Town has assessed the four Remedial Action Alternatives and submits the following for consideration. The major difference between the Alternatives is how much remediation is performed before the Town of Franklin sells the property through a request for proposals (RFP) process. The following evaluation criteria have been used to assess the four Alternatives: Protectiveness of Human Health & Environment; Implement-ability; Cost; and likelihood of obtaining a Developer for the site.

#### 4.1. Evaluation of Remedial Action Alternatives

#### Remedial Action Alternative 1.0: No Action

The No Action alternative consists of leaving the site in its current state, and distributing an RFP seeking written proposals for purchase and redevelop of the former manufacturing property.

Protectiveness of Human Health & Environment: Remedial Action Alternative 1 does not increase protection of human health or the environment.

Implement-ability: NA

Cost: \$0

Likelihood of Obtaining a Developer: The Town does not believe a developer for the Site will found until all Phase II assessment activities are complete.

# Remedial Action Alternative 2.0: Hazardous Building Materials Remediation, and Monitored Natural Attenuation.

Monitored Natural Attenuation,

Protectiveness of Human Health & Environment:

Implement-ability:

Cost: The cost of Hazardous Building Materials Remediation is substantial, but only half the cost of Alternative 4 below.

Likelihood of Obtaining a Developer: The likelihood of obtaining a developer would increase, but without completing contaminated soil remediation the potential uses for the site are very limited.

# Remedial Action Alternative 3.0: Remediation of Soil and Groundwater Contamination Only

Remedial Action Alternative 3 would only include remediation of soils adjacent to Building II. Work within Building II's foundation would not occur. The project would include removal of at least some contaminated soil.

Protectiveness of Human Health & Environment: Alternative 3 would likely decrease the level of contaminated soil at the site, but would not remove the

Implement-ability: The Town could fairly easily implement Alternative 3.

Cost: The cost of removing contaminated soil from the site that is to the east of Building II is not substantial, but will require a Town appropriation or grant.

Likelihood of Obtaining a Developer:

Remedial Action Alternative 4.0: Remediation of Hazardous Building Materials, Contaminated Soil and Groundwater

Alternative 4 consists of making structural improvements to the adjacent privately owned building, demolish Building II and remediate hazardous building materials, conduct Phase II site assessment activities adjacent to and within the footprint of the building foundation, remediation (removal) of contaminated soil, off-site disposal of soil containing VOC, and grading the site including stabilization of slopes.

Protectiveness of Human Health & Environment: Implementation of Alternative 4 will provide the Town will a relatively clean site where contaminates are largely reduced to safe levels. This alternative goes farthest towards protecting human health and the environment.

Implement-ability: Alternative 4 can be implemented over a one year period with assistance of contractors and consultant engineers, assuming the funding is obtained.

Cost: Alternative 4's cost is substantially higher than other alternatives considered. The Town will require grant funding to implement.

Likelihood of Obtaining a Developer: Once Alternative 4 is implemented the Town's property will be of interest to adjacent property owners and likely other developers.

# 4.2 Preferred Cleanup Alternative

Based on the evaluation of cleanup alternatives documented above, the Town considers Alternative 4 to be preferred.

#### 5.0 Selected Remedial Action Alternative

### 5.1 Description of Selected Remedial Action Alternative

The Town's preferred remedial action alternative is Remedial Action Alternative 4.0: Remediation of Hazardous Building Materials, Contaminated Soil and Groundwater

If awarded a 2017 EPA Brownfields Cleanup grant, funds will be for making structural improvements to the adjacent privately owned building, demolish Building II and remediate hazardous building materials, conduct Phase II site assessment activities adjacent to and within the footprint of the building foundation, removal of contaminated soil, and grading the site including stabilization of slopes.

A Cost Estimate from Tata & Howard for the needed Phase II Site Assessment activities was prepared for the Town in April 2015. The needed assessment activities include installation of four or more sets of shallow/deep groundwater wells, and ground water monitoring activities. Soil and groundwater samples need to be obtained from within the foundation of Building II, which is dilapidated and unsafe to access. As mentioned above Building II needs to be demolished in order to continue Phase II assessment activities.

Demolition of Building II. Demolition specifications, a demolition and segregation plan, wetland/waterway protection plans, and an invitation for bids for a demolition contractor were all prepared during 2015. These documents can serve as draft specifications for the demolition portion of an EPA funded project. Building material data compiled by EnviroScience in the March 2009 *Hazardous Building Materials Inspection* is generally sufficient to solicit bids for building demolition, and the bid documents can specifically solicit qualifications relative to controlled demolition and segregation of building materials proximal to wetland areas, hazardous materials abatement, and other project-specific requirements, in order to ensure that the selected contractor is capable of implementing a project of this magnitude. Interior abatement work is not considered feasible due to the structural condition of the building. To

implement this approach it will be necessary for the Town to apply for and receive a waiver from MassDEP to allow demolition prior to abatement.

Once Building II is demolished, soil samples are gathered, at least one set of bedrock wells are drilled, and soil and water samples are analyzed, the Town's LSP will determine if additional wells within the foundation are required. Remediation will likely include removal of at least some contaminated soil.

Once Building II is demolished the Town will conduct additional Phase II environmental assessment work <u>under</u> and directly adjacent to Building II's current footprint. Dependent upon results of the additional Phase II assessment activities, the Town will continue with the property's remediation, which will include removal of contaminated soils adjacent to Building II and possibly within the footprint of the former manufacturing facility.

#### **5.2 Barrier Membrane Installation**

Note: If a new building is constructed as part of the property redevelopment, a vapor barrier membrane would be installed beneath the entire structure to prevent / eliminate potential vapor intrusion pathway(s).

#### 5.3 Green and Sustainable Remediation Considerations

The Town will consider green and sustainable remediation options during the implementation of the selected remedial alternatives. The Best Management Practices (BMPs) issued under ASTM Standard E-2893: Standard Guide for Greener Cleanups will be used as a reference in this effort. In addition, The Town intends to ask bidding cleanup contractors to propose additional green remediation techniques in their response to the Request for Proposals for the cleanup contract.

# 5.4 Report Limitations

This ABCA Report was prepared for the exclusive use of the Town of Franklin and the USEPA. Future investigations, and/or information that were not available at the time of the analysis, may result in a modification of the findings stated in this report. No other warranty is expressed, written, or implied.

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