# DRAFT ANALYSIS OF BROWNFIELDS CLEANUP ALTERNATIVES (ABCA)
# COURTOIS SAND & GRAVEL SITE
# 230 MENDON ROAD
# NORTH ATTLEBOROUGH, MASSACHUSETTS
# MASSDEP RELEASE TRACKING NO. (RTN) 4-26386

Prepared for:

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## EXECUTIVE SUMMARY

On behalf of the Town of North Attleborough, Massachusetts, Ransom Consulting, Inc. (Ransom) has prepared this DRAFT Analysis of Brownfields Cleanup Alternatives (ABCA) for the Courtois Sand & Gravel site, located at 230 Mendon Road in North Attleborough, Massachusetts (the "Site"). The Site is identified by the Massachusetts Department of Environmental Protection (MassDEP) by Release Tracking Number (RTN) 4-26386. The Massachusetts Contingency Plan (MCP) disposal site comprises a portion of Parcel 29-12.

The Site consists of an approximate 12,288 square-foot (SF) parcel and is currently developed with one approximate 363 SF secured structure (the "Site building"), formerly utilized as a gas station building. The remainder of the Site not covered by the footprint of the Site building consists of asphalt-paved and concrete areas and areas overgrown by vegetation. The Site is surrounded by chain link fencing and a chained "gate," to restrict access. The Site was abandoned by the previous owner in the mid-1980s and was acquired by the City of Lynn in November 2015 as a tax taking and was subsequently transferred to EDIC Lynn. The Site has been unoccupied since at least 1985.

The following are the feasible and selected Remedial Action Alternatives (RAAs) for the Site:

1. Ex-Situ Technologies will include soil excavation; abandoned petroleum tank and vessel removal; removal of containerized waste; and, off-Site disposal. Demolition of Site buildings/structures are required to access contaminated soils.

2. Post-excavation confirmatory soil sampling will be conducted.

3. Since there is no evidence of contaminant impacts to Site groundwater, no groundwater performance monitoring will be conducted.

A public notice was published in Sun Chronicle newspaper on June 28, 2019 to provide notice of the ABCA public meeting at the Town Hall.

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## 1.0 INTRODUCTION

On behalf of the Town of North Attleborough, Massachusetts (Town), Ransom Consulting, Inc. (Ransom) has prepared this Analysis of Brownfields Cleanup Alternatives (ABCA) to address a release of petroleum hydrocarbons to soil at the Courtois Sand & Gravel site, located at 230 Mendon Road in North Attleborough, Massachusetts. The Site is identified by the Massachusetts Department of Environmental Protection (MassDEP) by Release Tracking Number (RTN) 4-26386. The Massachusetts Contingency Plan (MCP) Disposal site comprises a portion of Parcel 29-12.

## 2.0 SITE BACKGROUND

This section presents a brief general description and history of the Site, and a summary of the nature and extent of constituents of concern at the Site including the nature and extent of contaminant impacts to Site soil and groundwater.

### 2.1 Site Location and Description and Surrounding Use

The Site consists of an approximate 4.2-acre parcel of land identified as Parcel 12 on the Town of North Attleborough Assessor's Map 29. The Site is improved with an approximate 264-square foot (SF) building that was formerly used as a garage, along with remnants of a hopper/screener structure formerly used by the facility. The Site is abutted to the north by Mendon Road, beyond which is residential development; to the west and east by residential development; and to the south by the 6 additional parcels (Parcels 29-13, 29-14, 29-15, 29-16, 28-54, 28-58 and 29-111) that comprise the 72-acre property and are currently vacant. The Site is located within a Zone II and Interim Wellhead Protection Area (IWPA),

The Site is located on the Pawtucket, RI U.S. Geological Survey (USGS) 7.5-minute series Quadrangle. The Universal Transverse Mercator (UTM) coordinates of the approximate center of the Site are 4644865 meters north and 302874 meters east. The latitude and longitude of the Site are 41°55'52" north and 71°22'39" west, respectively.

Figure 1 is a Location Map and Figure 2 is a Site Plan.

## 3.0 DISPOSAL SITE HISTORY

### 3.1 History of Owner and Operations

According to Assessor records, the Site property was owned by Grace M. Newell in 1926, Grace M. Osgood in 1934, Grace P. and Allen Crawford in 1946 and was purchased by Courtois Sand & Gravel Co, in 1949 and acquired as a tax taking by the Town in 1998.

### 3.2 Waste Management History

Town Fire Department records indicate that Courtois Sand & Gravel Company requested permission on April 3, 1986 to install a 1,000-gallon tank. In addition, notification to remove a 2,000-gallon underground storage tank (UST) was conducted on July 27, 1967. A 1977 Plan for proposed sand & gravel facility depicts a fuel island to the east/southeast of the garage building. It is unclear if the fuel island was constructed.

Ransom observed evidence of abandoned scrap metal at the norther/northwestern portion of Parcel 29-12. An approximate 5-gallon container of leaking petroleum waste was observed within the area of scrap metal. The container was partially enclosed within a larger open scrap metal "container". Piles of miscellaneous debris containing metal, concrete and construction materials were observed throughout the Site property parcels. There was no evidence of staining or odors encountered within the area of the debris.

According to a 2011 Phase I Environmental Site Assessment (ESA), several empty drums and one drum of grease was observed in the garage building by a previous consultant. Ransom observed one abandoned rusted 1,000-gallon tank to the west of the former garage. There is no visual or olfactory evidence of leaking and/or staining at areas surrounding the tank. In 2011, BETA also observed what appears to be the same tank. A pump island is depicted on a "Location Plan for Courtois Sand & Gravel", dated January 19, 1977 near the Parcel 29-12 entrance. It is unclear of the pump island was installed.

### 3.3 Environmental Permits and Compliance History

The Courtois Sand & Gravel facility is listed by the United States Environmental Protection Agency (EPA) in the Superfund (Non-NPL) list (FRS ID 110039388855). However, it is Ransom's understanding that this listing is based on contaminant impacts at Parcels 28-15 and 28-16 associated with the Former Boulter Farm Area (BFA) site and does not include Parcel 29-12.

## 4.0 RELEASE HISTORY

### 4.1 Release Notification and MCP Compliance

From January to April 2016, Ransom completed a Site investigation which included the advancement of soil borings, the installation of groundwater monitoring wells and the collection and laboratory analysis of soil and groundwater samples and a limited geophysical survey. Concentrations of petroleum hydrocarbon constituents (C19-C36 Aliphatic Hydrocarbons) were detected in Site soil at levels exceeding its respective Massachusetts Contingency Plan (MCP) Reportable Concentrations for Soil Category S-1 (RCS-1). This exceedance triggered a MCP 120-day reporting condition and MassDEP assigned RTN 4-26386 to the site. The report listed below are available at MassDEP's website: https://eeaonline.eea.state.ma.us/EEA/fileviewer/Rtn.aspx?rtn=4-0026386

1. Phase I Initial Site Investigation and Tier Classification (Ransom Consulting, Inc., Nov. 2016)

## 5.0 ABCA AND MCP REMEDIAL OBJECTIVES

### 5.1 Applicable Regulations

Site Cleanup will be conducted pursuant to the MCP, 310 CMR 40.0000. Additional applicable local, state and federal regulatory requirements will be adhered to, including the appropriate procurement of contractors. The applicable regulation is the MCP.

### 5.2 Cleanup Oversight Responsibility

In 1993, Massachusetts created a model program that privatized the cleanup of hazardous waste sites in the Commonwealth. Licensed Site Professionals (LSPs) are authorized by the Commonwealth to work on behalf of property owners, operators, and other responsible parties to oversee the assessment and cleanup of contamination that has been released into the environment. LSPs are scientists, engineers, and public health specialists with significant professional expertise in oil and hazardous material contamination. LSPs are governed by the Massachusetts Board of Registration of Hazardous Waste Site Cleanup Professionals, also known as the LSP Board. Assessment and cleanup activities are conducted pursuant to the MCP. The Town is conducting voluntary Site cleanup. The Cleanup will be conducted by a Qualified Environmental Professional (QEP), Ransom Consulting, Inc.

### 5.3 Remedial Objectives

The remedial objectives for the Site is to achieve an MCP Permanent Solution by reducing concentrations of petroleum hydrocarbon constituents in Site soil, and to achieve a Condition of No Significant Risk to human health and the environment for a Permanent Solution.

The remedial performance standards applicable to this Site were assessed based on the results of the Phase I Initial Site Investigation and Tier Classification and MCP-defined requirements for achieving a Permanent or Temporary Solution.

### 5.4 Applicable Cleanup Standards

The applicable MCP Standards for the Site are Method 1 Soil Cleanup Standards and MCP Method 1 (S-1) Soil and Groundwater (GW-1/GW-2/GW-3) Standards. Soil and groundwater samples collected at the Site are analyzed for chemical constituents and the results of the analyses are compared to the MCP Cleanup Standards. These standards are protective of human health (including exposure by children and adults) for residential use and the environment.

The S-1 Soil category assumes that children and adults will occupy the Site at a high frequency and intensity and may be exposed to shallow soils. The “GW-1” groundwater category is protective of drinking water; the “GW-2” groundwater category is protective of indoor air impacts; and, the “GW-3” groundwater category is protective of surface water impacts.

### 5.5 General Climate Considerations

According to the Massachusetts Climate Change Adaption Report, the impacts of climate change are wide-ranging and growing in severity in Massachusetts, with impacts from sea level rise, storm events, flooding, greenhouse gas emissions and changing weather patterns. As a coastal state, storm surges have broad implications and impacts to infrastructure, natural resources and ecosystems, including drinking

water supplies. The financial impacts are expected to be very high. These climate considerations were incorporated into the evaluation and selection of remedial actions alternatives (RAAs).

## 6.0 IDENTIFICATION OF REMEDIAL ACTION ALTERNATIVES

This section presents the identification of potential technologies for addressing remediation of Site contaminants.

### 6.1 Initial Screening of Remedial Action Alternatives and Remedial Technologies

To develop a set of RAAs for detailed analysis, an initial screening of available remediation technologies (RTs) was performed. These RTs, which address the nature and extent of the impacted media, are described and considered in this section.

An RT was judged to be acceptable for further evaluation if: (1) it was likely to reduce risks to human health and the environment to levels which would permit the achievement of a Permanent Solution; and (2) the technology appeared to be technically and economically feasible for the Site.

Seven general classes of potentially applicable RTs for the Site have been identified and screened (see Table 1 and below) that may reduce levels of petroleum hydrocarbons in Site soil. Technologies in each of these categories were evaluated during the preliminary screening to facilitate a comprehensive review of technologies applicable for the Site. Alternatives from the following categories were evaluated during the preliminary screening:

1. No Action;
2. Institutional Controls;
3. Passive Containment;
4. Active Treatment/Removal/Containment;
5. Ex-Situ Technologies; and,
6. Monitoring.

An overview of all the classes of technologies and a general description of the ranking of each class of technology developed during the screening process is presented below. Table 1 presents a summary of the initial screening of potential RTs.

#### 6.1.1 No Action

The "No Action" alternative assumes that no additional remedial efforts are implemented to address elevated concentrations of volatile organic compounds (VOCs) and petroleum hydrocarbons at the Site. The "No Action" alternative can provide a basis for assessing the effects of implementing remedial actions; however, it does not directly reduce the toxicity, mobility or volume of impacted soils or sediment. This response action alternative does not reduce Site risks associated with impacted soil or groundwater, and provides no additional protection to human health or public welfare. Additionally, the contaminants of concern are at levels that are unlikely to attenuate below standards in a reasonable timeframe, and therefore, "No Action" would not reduce potential risk to human health and/or the environment in the long term.

Conclusion: The "No Action" alternative does not reduce the toxicity, mobility or volume of impacted environmental media. Because a Condition of No Significant Risk (NSR) does not currently exist at the Site, the "No Action" alternative does not maintain a Temporary Solution or achieve a Permanent Solution; therefore, this RT was removed from further consideration.

### 6.1.2 Institutional Controls

Institutional controls are mechanisms to limit access to impacted media and include alternatives such as fencing, barriers, and Activity and Use Limitations (AULs) in the form of deed restrictions. While institutional controls do not eliminate contamination, they can provide an effective, low cost means of reducing exposure potential, and thus risk, if properly maintained and enforced.

Institutional controls may be effective in mitigating exposure to contaminant impacts in locations at which it may be infeasible to reach MCP background conditions. Implementation of an AUL on a Site property to restrict access to impacted groundwater (other than as "exposure pathway elimination measures" or to restrict access to drinking water) is not supported by MassDEP. However, AULs may be implemented to ensure that engineering controls be maintained to mitigate potential risk.

Conclusion: This RT is a viable option that will be retained for future consideration.

### 6.1.3 Passive Containment

The primary purpose of containment technologies is to isolate impacted media, and thus control potential exposure risks. Passive containment involves placement of horizontal physical barriers, such as a cap, sealant or membrane, or vertical barriers such as a grout curtain, slurry wall, or sheet piling in the areas of contamination.

### 6.1.4 Vertical Barriers

A vertical barrier, such as a permeable reactive barrier (PRB) is defined as an *in-situ* method for remediating contaminated groundwater that combines a passive chemical or biological treatment zone with subsurface fluid flow management. Treatment media may include zero-valent iron, chelators, sorbents, and microbes to address a wide variety of groundwater contaminants, such as chlorinated solvents, other organics, metals, inorganics, and radionuclides. The contaminants are concentrated and either degraded or retained in the barrier material, which may need to be replaced periodically. For vertical barriers, such as slurry walls, hydraulic capture may also be required (i.e., an active groundwater recovery/treatment system), since slurry walls divert groundwater flow. Although passive vertical containment may be designated as a feasible RT for containment of contaminant/source impacts, this RT does not address source removal.

### 6.1.5 Horizontal Barriers

The primary purpose of passive containment technologies is to isolate impacted media, and thus control potential exposure risks. Passive containment using horizontal barriers involves placement of physical barriers, such as a cap, in order to limit the potential for exposure to impacted media. A vapor barrier is considered as a horizontal barrier for future occupied buildings at the Site property and an engineered cap is considered for contaminated soils and/or sediments.

The purpose of a cap is to protect human and environmental receptors from constituents of concern by means of physical separation. A cap consists of a physical barrier that can range widely in composition and can consist of a single or multiple layers. Caps are designed to be either permeable or impermeable. Permeable caps are intended to provide a physical barrier to exposure and typically consist of soil or stone, sometimes supplemented with synthetic materials (e.g. geotextiles). Impermeable caps are designed to prevent infiltration of precipitation or migration of gases and typically include a synthetic membrane or low-permeability soil layer. Caps are usually accompanied with an AUL in order to prevent the possibility of future exposure as a result of a change in Site use. In addition, a visual marker (i.e., geotextile fabric) is installed under the cap to delineate clean versus contaminated soil and assist in identifying when cap erosion has occurred.

Conclusion: Passive containment measures (horizontal barriers) are suitable for the Site. However, vertical barriers are not feasible, since there is no evidence of groundwater contaminant impacts. This RT (horizontal barriers) is a viable option that will be retained for further consideration.

### 6.1.6 Active Treatment/Removal/Containment Systems

Active Removal: The removal of "containers" and associated waste that may serve as an ongoing contaminant source. The abatement and demolition of Site buildings/structures are performed to access contaminated media within the building/structure footprint.

Groundwater Recovery and/or Treatment: Groundwater recovery may be utilized solely for containment purposes or may also be used for groundwater treatment. Groundwater extraction/recovery and treatment ("pump and treat") is a proven technology for the recovery of impacted groundwater. This method is also a conventional means to induce hydraulic containment of a groundwater table surface. Implementation of these systems may involve the installation of multiple large diameter extraction wells, treatment equipment, and a means to discharge treated effluent. The effectiveness of groundwater pump and treat systems is highly dependent on factors such as secondary groundwater quality (iron content, hardness, pH), source location and volume, and soil type, permeability and saturated thickness.

Soil permeability and well field design will directly influence well yields, and determine whether the system will operate intermittently or continuously. Excessive intermittent operation of a system or "cycling" can be detrimental to system components. Although groundwater recovery and treatment is successful in establishing groundwater plume capture, the limitations and challenges of this technology include high utility costs, numerous extraction wells for larger plumes, and generation of high quantities of groundwater.

Sub-Slab Depressurization System: A sub-slab depressurization (SSD) system is effective at mitigating vapor intrusion impacts to receptors in buildings, due to volatile contaminants in groundwater that can accumulate in the vadose zone and impact indoor air. Active systems require ongoing monitoring and maintenance and the use of telemetry or remote monitoring measures to support a MCP Active Exposure Pathway Mitigation Measure (AEPMM).

Conclusion: This RT (Active Removal) is a viable option that will be retained for further consideration.

### 6.1.7 Ex-Situ Treatment

The primary purpose of ex-situ treatment technologies is to remove impacted media, and thus control potential exposure risks.

Soil Excavation: Excavation involves the removal of impacted soil that presents a potential direct contact risk, along with soil which may serve as a continuing source of petroleum hydrocarbon to Site groundwater. The impacted soil is removed from its current setting and transported off-Site for contaminant removal, recycling and/or disposal. Soil excavation could potentially provide limited source removal and is feasible for shallow Site soils, including areas of future underground utilities.

Dewatering: For soil excavations conducted within the water table, dewatering allows for additional soil excavation to be conducted "in the dry;" assists in stabilizing the structure of the excavation; and, serves to remediate groundwater through the use of granulated activated carbon units. Dewatered groundwater is temporarily stored on Site using fractionation (frac) tanks and may be discharged to a municipal utility under a permit; to a catch basin/water body under an EPA Remediation General Permit (RGP); or, disposed to a licensed acceptance facility under a MCP Bill of Lading (BOL) and managed as remediation waste.

Conclusion: This RT is a viable option that will be retained for additional consideration. However, dewatering is not anticipated.

### 6.1.8 In-Situ Treatment

In-situ (organic or inorganic/chemical) treatment or augmentation technologies are most dependent upon the ability to deliver the treatment material to the affected subsurface area, and the sustainability or effective life of the material. Petroleum hydrocarbon and VOC constituents in Site groundwater are amenable to aerobic biological technologies and chemical oxidative technologies (ozone, permanganate, persulfate, oxygen releasing compounds (ORC), and hydrogen peroxide). To effectively assess performance, bench-scale treatability studies and pilot testing is recommended prior to implementation.

In-situ chemical oxidation (ISCO) is a remediation process in which contaminants are chemically converted to less toxic compounds (water, oxygen, and carbon dioxide). There are several types of commercially available oxidants that have been demonstrated to be effective in reducing VOC and petroleum hydrocarbon contamination in groundwater. Effective distribution of the reagents and the reactivity of the selected oxidant with the contaminant are crucial in achieving reduction in VOC concentrations. Soil oxidant demand varies with soil type, the nature of the site groundwater and soil composition. Contaminant oxidant demand is based on total contaminant mass and mass distribution. Groundwater monitoring is essential in evaluating the performance of this remedy.

Chemical oxidation typically involves reduction/oxidation (redox) reactions that chemically convert hazardous compounds to nonhazardous or less toxic compounds that are more stable, less mobile, or inert. Redox reactions involve the transfer of electrons from one compound to another. Specifically, one reactant is oxidized (loses electrons) and one is reduced (gains electrons). The oxidizing agents most commonly used for treatment of hazardous contaminants in soil and groundwater are zero valent iron, hydrogen peroxide, catalyzed hydrogen peroxide, potassium permanganate, sodium permanganate, sodium persulfate, and ozone. Each oxidant has

advantages and limitations, and while applicable to soil contamination and some source zone contamination, they have been applied primarily toward remediating groundwater.

Bioremediation uses microorganisms to degrade organic contaminants in soil, sludge, and solids either excavated or in situ. The microorganisms break down contaminants by using them as a food source or co-metabolizing them with a food source. Aerobic processes require an oxygen source, and the end products typically are carbon dioxide and water. Anaerobic processes are conducted in the absence of oxygen, and the end products can include methane, hydrogen gas, sulfide, elemental sulfur, and dinitrogen gas.

In-situ techniques stimulate and create a favorable environment for microorganisms to grow and use contaminants as a food and energy source. Generally, this means providing some combination of oxygen, nutrients, and moisture, and controlling the temperature and pH adjustment. Sometimes, microorganisms that have been adapted for degradation of specific contaminants are applied to enhance the process.

Conclusion: This RT is not a viable option and will not be retained for further consideration.

#### 6.1.9 Monitoring

Post-excavation confirmatory soil sampling is conducted to assess the effectiveness of contaminant source removal.

Groundwater monitoring is conducted to assess potential impacts over time. Groundwater is collected from monitoring wells at and/or hydraulically downgradient of the cleanup area.

Conclusion: This RT is a viable option that will be retained for additional consideration.

## 7.0 EVALUATION OF REMEDIAL ACTION ALTERNATIVES

As discussed in Section 5.0, three potential RTs are evaluated from the set of viable technologies at this Site for addressing impacted media at the Site. The following RAAs have been developed from a **combination of RTs as an integrated approach** and are summarized below and in Table 1.

1. RAA-1: No Remedial Action and Monitoring

2. RAA-2: Ex-Situ Technologies, Active Removal, Monitoring

3. RAA-3: Institutional Controls, Passive Containment, Active Removal (limited), Monitoring

The identified RAAs were evaluated with respect to the criteria established in the MCP for a detailed evaluation (310 CMR 40.0858). These criteria are:

1. Comparative Effectiveness. This criterion provides an evaluation of the effectiveness of the RAAs in achieving a Permanent or Temporary Solution; reusing, recycling, destroying, detoxifying or treating OHM; and reducing levels of residual OHM to background levels.

2. Comparative Reliability. This criterion evaluates the degree of certainty that the RAA will be successful and the effectiveness of any measures required to treat residues or remaining waste or control emissions or discharges to the environment.

3. Comparative Difficulty in Implementation: This criterion evaluates the comparative difficulty in implementing the RAA. It includes an evaluation of:

    a. The technical complexity of the RAA;
    b. Integration of the RAA with facility operations or other remedial actions;
    c. Necessary monitoring, operations, maintenance or site access;
    d. Availability of necessary services, materials, equipment or specialists;
    e. Availability, capacity and location of off-site treatment, storage and disposal facilities; and
    f. Whether the RAA meets the requirements for any necessary regulatory approvals, permits or licenses.

4. Comparative Cost. This criterion includes evaluation of implementation costs, including design, construction and, if necessary, operation and maintenance costs, costs of environmental restoration, and costs of consumption of energy resources.

5. Comparative Risks. This criterion includes an evaluation of short-term on-Site and off-Site risks posed by implementation of the RAA associated with excavation, transport, disposal, containment, construction, operation or maintenance activities, or discharges from the remedial system; on-site and off-site risks posed by the RAA until the remedial objectives are attained; and potential risks to human health, public welfare, the environment posed by residual contamination once the remedial action is completed.

6. Comparative Benefits. This criterion includes an evaluation of the benefit of restoring natural resources, providing for the productive reuse of the Site, the avoided costs associated with relocating people, and the avoided lost property value of the Site.

7. Comparative Timeliness. This criterion includes an evaluation of timeliness of the RAA in eliminating uncontrolled sources and attaining a condition of NSR.

8. Comparative Effect Upon Non-Pecuniary Interests. This includes an evaluation of the RAAs effect on non-pecuniary issues such as aesthetic issues.

## 7.1 Comparative Evaluations

The comparative evaluation of each of these criteria is discussed below and is summarized in Table 2A. In order to quantify the benefits of each alternative and select the most appropriate RAA, a criteria-based numerical scoring of each of the RAAs has been conducted and is presented in Table 2B. In this evaluation, each of these criteria is given equal weight of importance. For a given RAA, a score ranging from 1 (lowest ranking) to 5 (highest ranking) was assigned for each criterion based on that RAAs ability to satisfy the criterion. The RAA with the highest overall score was judged to be the most appropriate RAA for the Site (Tables 2A and 2B).

### 7.1.1 Comparative Effectiveness

In accordance with 310 CMR 40.0858, "the effectiveness of each RAA was evaluated in terms of a) achieving a Permanent or Temporary Solution under 310 CMR 40.1000; (b) reusing, recycling, destroying, detoxifying, or treating oil and hazardous material at the disposal Site; and (c) reducing levels of untreated OHM at the Site to concentrations that achieve or approach background." The relative effectiveness of a Permanent Solution is judged based on the RAAs ability to reduce the mobility, toxicity, or volume. Refer to Tables 2A and 2B.

RAA-1: No Remedial Action and Monitoring

1. No remedial action is conducted and ineffective at reducing Site contaminants.

2. Monitoring**:** Groundwater monitoring is conducted to assess potential impacts to groundwater over time. However, this measure is ineffective at reducing Site contaminants, since source removal is not conducted.

RAA-1 is an ineffective measure to remediate Site contaminants and achieve a Permanent Solution.

RAA-2: Ex-Situ Technologies, Active Removal, Monitoring

1. Ex-Situ Technologies: Soil is excavated and disposed off-Site as an effective measure to remediate contaminant sources.

2. Active Removal: Removal of tanks, vessels, piping and containerized waste are removed and managed off-Site as an effective source removal measure. Buildings/structures are removed as an effective measure to access contaminated media.

3. Monitoring: Collection and analysis of post-excavation confirmatory soil samples is conducted as an effective post-remedial measure to monitor the effectiveness of remediation.

RAA-2 is a highly effective measure to remediate Site contaminants and achieve a MCP Permanent Solution (without Conditions).

RAA-3: Institutional Controls, Passive Containment, Active Removal (limited), Monitoring

1. Institutional Controls: An AUL is implemented to effectively address engineering controls associated with contaminated soil.

2. Passive Horizontal Containment: A clean soil cap is installed over contaminated soils and is an effective measure to mitigate impacts to receptors. A vapor barrier is constructed at new structures as an effective measure to mitigate potential vapor intrusion impacts to receptors.

3. Active Removal (limited): Accessible contaminant sources (abandoned tanks/vessels and containerized waste) are removed as an effective source removal measure. However, buildings/structures are not demolished.

4. Monitoring**:** Groundwater monitoring is conducted as an effective measure to assess potential future contaminant impacts. However, this measure is ineffective at reducing Site contaminants, since source removal (contaminated soil) is not conducted.

RAA-3 is a moderately effective measure to reduce the exposure risks from Site contaminants and achieves a MCP Permanent Solution (with Conditions), since no remediation of contaminated source (soils) is conducted. Therefore, there is a risk of exposure to Site contaminants during future redevelopment and if barriers are not maintained.

### 7.1.2 Comparative Reliability

In accordance with 310 CMR 40.0858 (2), the short and long-term reliability for each of the RAAs were evaluated based on "(a) the degree of certainty that the RAA would be successful; and (b) the effectiveness of any measures required to manage residues or remaining wastes or control emissions or discharges to the environment." Specific factors considered in judging the short and long-term reliability include: protection of workers and the community during construction, environmental impacts resulting from implementation of the remedial response action, the time required to achieve protection and long-term reliability of management controls providing protection from residual wastes. Refer to Tables 2A and 2B.

RAA-1: No Remedial Action and Monitoring

1. No remedial action is conducted, which is unreliable in reducing Site contaminants.

2. Monitoring**:** Groundwater monitoring is conducted to assess potential future impacts. However, this measure is unreliable in reducing Site contaminants and mitigating potential impacts to future receptors.

RAA-1 has a low degree of certainty of success in reliability.

RAA-2: Ex-Situ Technologies, Active Removal, Monitoring

1. Ex-Situ Technologies: Soil excavation and disposal are reliable remedial measures to remove contaminant sources.

2. Active Removal: Removal of tanks, vessels, piping and containerized waste are reliable remedial measures to remove contaminant sources. Buildings/structure demolition are reliable measures to access contaminated media.

3. Monitoring: Collection and analysis of post-excavation confirmatory soil samples is conducted as reliable measures to monitor the effectiveness of remediation.

RAA-2 has a high degree of certainty of success in reliability.

RAA-3: Institutional Controls, Passive Containment, Active Removal (limited), Monitoring

1. Institutional Controls: An AUL is a reliable measure to address engineering controls associated with contaminated soil, but ineffective for groundwater.

2. Passive Horizontal Containment: A clean soil cap and vapor barriers are reliable measures to mitigate impacts to receptors. However, ongoing monitoring is required to ensure reliability.

3. Active Removal (limited): Removal of tanks, vessels, piping and containerized waste are reliable remedial measures to remove contaminant sources.

4. Monitoring**:** Groundwater monitoring is conducted as a reliable measure to assess potential future contaminant impacts.

RAA-3 has a moderate degree of certainty of success in reliability.

7.1.3 Comparative Difficulty in Implementation

In accordance with 310 CMR 40.0858(3), difficulty in Implementation of each of the alternatives was evaluated based on: "(a) the technical complexity of the alternative; (b) where applicable the integration of the alternative with existing facility operations and other current or potential remedial actions; (c) any necessary monitoring, operations, maintenance or site access requirements or limitations; (d) the availability of necessary services, materials, equipment, or specialists; (e) the availability, capacity and location of necessary off-site treatment, storage and disposal facilities; and (f) whether the alternative meets regulatory requirements for any likely approvals, permits or licenses required by MassDEP or other state, federal or local agencies." Refer to Tables 2A and 2B.

RAA-1: No Remedial Action and Monitoring

1. No remedial action is readily implementable.

2. Monitoring**:** There is low to moderate technical complexity associated with implementation

RAA-1 has a low to moderate technical complexity to implement.

RAA-2: Ex-Situ Technologies, Active Removal, Monitoring

1. Ex-Situ Technologies: There is moderate technical complexity associated with implementation.

2. Active Removal: There is moderate to high technical complexity associated with implementation.

3. Monitoring**:** There is low to moderate technical complexity associated with implementation.

RAA-2 requires moderate to high technical complexity to implement.

RAA-3: Institutional Controls, Passive Containment, Active Removal (limited), Monitoring

1. Institutional Controls: There is low to moderate technical complexity associated with implementation.

2. Passive Horizontal Containment: There is moderate technical complexity associated with implementation.

3. Active Removal (limited): There is moderate technical complexity associated with implementation.

4. Monitoring**:** There is low to moderate technical complexity associated with implementation.

RAA-3 requires low to moderate technical complexity to implement.

#### 7.1.4 Comparative Costs

In accordance with 310 CMR 40.0858 (4), the cost to implement each alternative was evaluated based on (a) costs of implementing the alternative, including without limitation: design, construction, equipment, site preparation, labor, permits, disposal, operation, maintenance and monitoring costs; (b) costs of environmental restoration, potential damages to natural resources, including consideration of impacts to surface waters, wetlands, wildlife, fish and shellfish habitat; and(c) the relative consumption of energy resources in the operation of the alternatives, and externalities associated with the use of those resources.

RAA-1: No Remedial Action and Monitoring

1. No remedial action does not require any costs.

2. Monitoring: There are moderate to high costs associated with monitoring and reporting over at least 20 years.

RAA-1 has moderate to high costs to implement.

RAA-2: Ex-Situ Technologies, Active Removal, Monitoring

1. Ex-Situ Technologies: There are moderate to high costs associated with this technology.

2. Active Removal: There are moderate to high costs associated with this technology.

3. Monitoring**:** There are moderate costs associated with this technology

RAA-2 requires moderate to high costs to implement.

RAA-3: Institutional Controls, Passive Containment, Active Removal (limited), Monitoring

1. Institutional Controls: There are low costs to implement this action.

2. Passive Horizontal Containment: There are moderate costs associated with this technology.

3. Active Removal (limited): There are moderate costs associated with this technology.

4. Monitoring**:** There are moderate to high costs associated with monitoring and reporting over at least 20 years.

RAA-3 requires moderate to high costs to implement.

7.1.5 Comparative Risks

In accordance with 310 CMR 40.0858(5), the risks associated with each RAA were evaluated based on: (a) the short-term on-site and off-site risks posed during implementation of the RAA associated with any excavation, transport, disposal, containment, construction, operation or maintenance activities, or discharges to the environment from remedial systems; (b) the on-site and off-site risks posed over the period of time required for the RAA to attain applicable remedial standards, including risks associated with ongoing transport, disposal, containment, operation or maintenance activities, or discharges from remedial systems; and (c) the potential risk of harm to health, safety, public welfare or the environment posed to human or environmental receptors by any oil and/or hazardous material remaining at the disposal site after the completion of the remedial action.

RAA-1: No Remedial Action and Monitoring

1. No remedial action has a high risk of harm to human and environmental receptors, since Site contaminants remain in place and does not incorporate climate concerns associated with flooding and migration of contaminants.

2. Monitoring**:** There are low to moderate risks associated with this implementation of activity.

RAA-1 has moderate to high risk to implement.

RAA-2: Ex-Situ Technologies, Active Removal, Monitoring

1. Ex-Situ Technologies: There are moderate short-term risks associated with soil excavation and transport and disposal, which are mitigated by implementing proper health & safety (H&S) measures.

2. Active Removal: There are moderate short-term risks associated with this technology which are mitigated by implementing proper H&S measures.

3. Monitoring**:** There are low to risks associated with this technology.

RAA-2 has low to moderate risk to implement.

RAA-3: Institutional Controls, Passive Containment, Active Removal (limited), Monitoring

1. Institutional Controls: There are low risks associated with this action. However, there is a moderate risk of harm to human and environmental receptors, since Site contaminants remain in place.

2. Passive Horizontal Containment: There are low to moderate risks associated with implementation of this technology.

3. Active Removal (limited): There are moderate short-term risks associated with this technology which are mitigated by implementing proper H&S measures.

4. Monitoring**:** There are low to moderate risks associated with implementation of this with this technology.

RAA-3 has a moderate risk to implement.

7.1.6 Comparative Benefits

In accordance with 310 CMR 40.0858(6), the benefits of each RAA were evaluated based on: "(a) the benefit of restoring natural resources; (b) providing for the productive reuse of the Site; (c) the avoided costs of relocating people, businesses, or providing RAA water supplies; and (d) the avoided lost value of the Site."

RAA-1: No Remedial Action and Monitoring

1. No remedial action is not beneficial, since contaminant sources remain in place.

2. Monitoring: This measure is moderately beneficial to assess groundwater contamination but not beneficial in reducing the contaminant source impacts.

RAA-1 is a low beneficial remedial option.

RAA-2: Ex-Situ Technologies, Active Removal, Monitoring

1. Ex-Situ Technologies: Soil excavation and disposal are highly beneficial measures that remove the contaminant source and allow for productive Site reuse.

2. Passive Horizontal Containment: A clean soil cap and vapor barrier are moderately beneficial technologies to mitigate contaminant impacts to receptors.

3. Active Removal: This is a highly beneficial measure to address contaminant sources.

4. Monitoring: Post-excavation confirmatory sampling is a highly beneficial measure to evaluate remediation.

RAA-2 is a highly beneficial remedial option.

RAA-3: Institutional Controls, Passive Containment, Active Removal (limited), Monitoring

1. Institutional Controls**:** An AUL is a moderately beneficial measure to allow for productive Site reuse, although it does not remove the source of the contamination.

2. Passive Horizontal Containment: This technology is moderately beneficial.

3. Active Removal (limited): This technology is moderately beneficial, since not all contaminant sources are removed.

4. Monitoring: Groundwater monitoring is a highly beneficial measure to assess groundwater quality but is less beneficial without removal of the source of the contamination.

RAA-3 is a moderately beneficial remedial option.

7.1.7 Comparative Timeliness

In accordance with 310 CMR 40.0858(7), a review is required of "the comparative timeliness of the RAAs in terms of eliminating any uncontrolled sources of oil and/or hazardous material and achieving a level of No Significant Risk as described in 310 CMR 40.0900".

RAA-1: No Remedial Action and Monitoring

1. No remedial action is very timely, since no action is taken.

2. Monitoring: Groundwater is anticipated to be conducted indefinitely, since the contaminant source is not removed.

RAA-1 is expected to achieve a Permanent Solution within a relatively short time period. However, the conditions required to support the Permanent Solution require long-term OM&M.

RAA-2: Ex-Situ Technologies, Active Removal, Monitoring

1. Ex-Situ Technologies: This technology can be conducted within a relatively moderate time period (weeks).

2. Active Removal: This technology can be conducted within a relatively short time period (days).

3. Monitoring**:** This is expected to be conducted within a relatively short time period (days).

RAA-2 is expected achieve a Permanent Solution within a relatively moderate time period.

RAA-3: Institutional Controls, Passive Containment, Active Removal (limited), Monitoring

1. Institutional Controls**:** An AUL can be implemented within a short time period (weeks).

2. Passive Containment: These measures can be installed during Site building construction within a moderate time period.

3. Active Removal (limited): This technology can be conducted within a relatively short time period (days).

4. Monitoring: Groundwater is anticipated to be conducted indefinitely, since the contaminant source is not removed.

RAA-3 is expected to achieve a Permanent Solution within a relatively moderate time period. However, the conditions required to support the Permanent Solution require long-term OM&M.

7.1.8 Comparative Effect Upon Non-Pecuniary Interests

The non-pecuniary interests of each RAA were evaluated based on aesthetics and interests of the local community in accordance with 310 CMR 40.0858(8), "the relative effect of the RAAs upon non-pecuniary interests, such as aesthetic values" was evaluated.

RAA-1: No Remedial Action and Monitoring

1. No remedial action will have high potential impacts on the community, due to concerns regarding contamination and will have a high impact on Site aesthetics, since the contaminant impacts are likely to impede reuse.

2. Monitoring**:** Groundwater monitoring is anticipated to have a moderate effect on aesthetics and disturbance to the community, due to the visible presence of wells and long-term monitoring.

RAA-1 will have low effects on non-pecuniary interests.

RAA-2: Ex-Situ Technologies, Active Removal, Monitoring

1. Ex-Situ Technologies: Implementation will have a short-term high impact on aesthetics and disturbance to the community.

2. Active Removal: Implementation will have a short-term moderate effect on aesthetics and disturbance to the community.

3. Monitoring**:** Monitoring will have a short-term moderate impact on aesthetics and disturbance to the community.

RAA-2 will have a moderate effect on non-pecuniary interests.

RAA-3: Institutional Controls, Passive Containment, Monitoring

1. Institutional Controls: An AUL has a minimal impact on the interests of the local community and no impact on aesthetics.

2. Passive Containment: Implementation will have a short-term high impact effect on aesthetics and disturbance to the community.

3. Monitoring**:** Groundwater monitoring is anticipated to have a moderate effect on aesthetics and disturbance to the community, due to the visible presence of wells and long-term monitoring (20 years).

RAA-3 will have a moderate effect on non-pecuniary interests.

7.2 Feasibility Evaluation

In accordance with 310 CMR 40.0860, a feasibility evaluation has been performed.

1. Implementation of remedial measures described as RAA-2 (Ex-Situ Technologies, Active Removal, Monitoring) will likely achieve a Permanent Solution.

2. Reducing Site contaminant concentrations to levels below MCP Method 1 Standards is feasible and is anticipated to approach background conditions.

## 8.0 SELECTION OF REMEDIAL ACTION ALTERNATIVE

RAAs were selected based on the detailed evaluation criteria addressed in previous sections of this report and in compliance with the provisions set forth in 310 CMR 40.0850, 40.0900 and 40.1000. Three RTs (Ex-Situ Technologies, Active Removal, Monitoring) were selected together as a feasible RAA (RAA-2) to mitigate impacts of exposure to elevated concentrations of petroleum hydrocarbons in Site soil and groundwater and achieve a MCP Permanent Solution and level of No Significant risk to human health and the environment.

1. Ex-Situ Technologies will include soil excavation and off-Site disposal.

2. Active Removal of tanks, vessels, piping and containerized waste are reliable remedial measures to remove contaminant sources. Buildings/structure demolition are performed to access contaminated soils.

3. Post-excavation confirmatory soil sampling and analysis are conducted

## 9.0 ABCA PUBLIC MEETING

A public notice was published in Sun Chronicle on June 28, 2019 to provide notice of the ABCA public meeting at Town Hall.

A copy of the public notice and proof of publication are included as Appendix A. The meeting sign-in sheet is included as Appendix B [pending July 10th meeting].

**TABLE 1**
**INITIAL SCREENING OF POTENTIAL REMEDIAL ACTION ALTERNATIVES**
**Courtois Sand & Gravel site**
**North Attleborough, Massachusetts**
**RTN 4-26386**

| General Remedial Action Technology | Specific Remedial Technology | Description | Effectiveness | Reliability | Implementability | Cost | Viability |
|---|---|---|---|---|---|---|---|
| 1. No Remedial Action | No Remedial Effort | The no action alternative assumes no additional efforts are made to mitigate chemical constituents in the soil or groundwater at the Site. | Effective as a temporary solution, but does not provide any contaminant mitigation or any protection for human and environmental receptors. | Low reliability | Readily implementable | High costs | Viable only as a base option to measure effectiveness of other remedial technologies. Retained for further consideration. |
| 2. Institutional Controls | AULs, Deed Restrictions, and Fencing | Limits future Site uses to those that pose acceptably low risk of human exposure to Site constituents of concern and requires specific health and safety protocols for subsurface work. | Effective for protection of human health by limiting exposures to Site soils and/or sediments if enforced. AULs cannot be used to mitigate the risk posed by impacted groundwater. Does not reduce toxicity or volume of compounds. | Moderate Reliability | Readily implementable | Low costs | Viable technology as an adminstrative control. Retained for further consideration. |
| 3. Passive Containment | Vertical and Horizontal Barriers | Passive containment involves placement of horizontal physical barriers, such as a cap or geotextile barrier, or vertical barriers, such as a grout curtain, slurry wall, sheet piling. | Vertical barrier may be effective after source removal, as a measure to mitigate off-Site migration of a plume, rather than remediate source.<br><br>Horizontal barrier (i.e., cap, vapor barrier) is a feasible RAA to mitigate exposure to contaminated soils and potential petroleum hydrocarbon vapors to indoor air if Site buildings are extended above groundwater impacts. | High reliability (horizontal barrier), assuming that an exterior cap is inspected on a regular basis.<br><br>For a vertical barrier, moderate reliability, assuming hydraulic control of groundwater. | Implementable (horizontal barrier) especially if planned as part of construction/reconstruction.<br><br>Implementable (vertical barrier), however, would need to incorporate future construction requirements, including underground utilities. Would need to include groundwater control technologies to mitigate potential off-Site migration of contamination. | Horizontal barrier: Moderate capital costs<br><br>Vertical barrier: High capital costs, due to infrastructure and groundwater containnmen for vertical barriers. | Horizontal barriers are a viable technology and retained for further consideration.<br><br>Vertical barriers are not retained for further consideration. |
| 4. Active Treatment/Removal/ Containment | Treatment of and/or mitigation or removal of contaminated media | Removal of contaminated media, including containerized waste, vessels, piping and and tanks. Demolition of site buildings/structures to access contaminated media, including abatement of hazardous materials. For sites with groundwater impacts: Recover impacted groundwater by pumping to the surface and treating through the use of granulated activated carbon adsorber (GACA) units. Provides hydraulic containment and can be used to lower water table and treat groundwater during soil excavation An active subslab depressuration system (SSDS) is installed at new structures to mitigate vapor intrusion impacts. | Effective for removal of contaminant source. Effective for protection of human health and the environment by limiting exposures and in controlling groundwater flow and in treatment of contaminated groundwater. Effective for mitigating vapor intrusion impacts to receptors. | High reliability for intact contaminanted sources. Moderate to high reliability for vapor intrusion mitigation | Building/structure demolition are implementable. Removal of piping, tanks, vseels and containerized waste are implementable. | Moderate to high implementation costs. Moderate operation, monitoring and maintenance costs. | Retained for further consideration (except technologies that address groundwater contaminant impacts). |
| 5. Ex-Situ Technologies | Soil Excavation and off-Site Disposal | Physically treat and/or remove contaminated media from the Site | Effective for protection of human health and the environment by removing source. | Moderate to High reliability for source removal. | Readily implementable in accessible areas. | Moderate to high costs | Retained for further consideration. |
| 6. In-Situ Technologies | In-Situ Chemical Oxidation<br><br>In-Situ Bioremediation | Injection or mixing of oxidants or microbes and potententially coamendments directly into the source zone and downgradient plume | Highly effective in reducing petroleum hydrocarbon (i.e., carbon sources) concentrations in groundwate with favorable lithology (i.e., sandy soils). May also be used subsequent to the implementation of ex-situ treatment technologies to reduce groundwater concentrations. An option for soil mixing. | Low to moderate reliability | Readiliy implementable | Moderate to high capital costs. Moderate OM&M costs | Not a viable technology. Not retained for future consideration. |
| 7. Monitoring | Post-excavation confirmatory sampling (soil)<br>Monitored Natural Attenuation (MNA) | Soil samples are collected subsequent to source removal to assess post-clenaup impacts. Groundwater is monitored in a carefully controlled approach to demonstrate that MNA is occurring, based on measurement of specific parameters | Effective after active measures have stabilized and/or reduced contaminant impact | High reliability (soil)<br>Moderate reliability (groundwater) | Readily implementable | Moderate costs | Viable and retained for further consideration |

**TABLE 2A**
**COMPARATIVE EVALUATION OF REMEDIAL ACTION ALTERNATIVES**
**Courtois Sand & Gravel site**
**North Attleborough, MA**
**RTN 4-26386**

| Evaluation Criteria | Remedial Action Alternative 1<br>No Remedial Action and Monitoring | Remedial Action Alternative 2<br>Ex-Situ Technologies, Active Removal, Monitoring | Remedial Action Alternative 3<br>Institutional Controls, Passive Containment, Active Removal (limited), Monitoring |
|---|---|---|---|
| **1. Effectiveness** | | | |
| a) ***Ability to Achieve a Permanent or Temporary Solution*** | This alternative may not achieve a Permanent Solution | This alternative may achieve a Permanent Solution (without Conditions) | This alternative may achieve a Permanent Solution (with Conditions) |
| b) ***Ability to Reuse, Recycle, Destroy, Detoxify, or Treat*** | This alternative does **not** reuse, recycle, destroy, detoxify, or treat impacted media | This alternative does reuse, recycle, destroy, detoxify, or treat impacted media | This alternative does reuse, recycle, destroy, detoxify, or treat impacted media, with the exception of contaminated soil. |
| c) ***Ability to Achieve or Approach Background*** | This alternative is not anticipated to achieve but it may approach background | This alternative is not anticipated to achieve but it may approach background | This alternative is not anticipated to achieve or approach background |
| **Effectiveness Ranking** | 1 | 5 | 3 |
| **2. Reliability (Short-term and Long-term)** | | | |
| a) ***Degree of Certainty of Success*** | This alternative has a low degree of certainty of success in reliability, since no remediation is conducted | This alternative has a high degree of certainty of success in reliability. | This alternative has a moderate degree of certainty of success in reliability, since no soil remediation is conducted. |
| b) ***Effectiveness in Managing Residues and Wastes*** | Minimal wastes generated during well monitoring. | Waste will be generated for soil, tank/vessel/pipe, containerized waste disposal. | Waste will be generated for soil, tank/vessel/pipe, containerized waste disposal. Minimal wastes generated during well monitoring. |
| c) ***Effectiveness in Controlling Emissions or Discharges*** | Health & Safety measures will be implemented during groundwater monitoring. No effectiveness in controlling contaminant source. | Dust mitigation will be implemented during soil remediation activities. Health & Safety measures will be implemented during remediation. Standard measures will be implemented for management of drill cuttings/purge groundwater | Health & Safety measures will be implemented during limited remediation and during groundwater monitoring. There is effectiveness in controlling remaining contaminant source, assuming barriers are maintained. |
| **Reliability Ranking** | 1 | 5 | 3 |
| **3. Ease of Implementation** | | | |
| a) ***Technical Complexity*** | Moderate technical complexity associated with implementation of this alternative. | Moderate technical complexity associated with implementation of this alternative. | Moderate technical complexity associated with implementation of this alternative. |
| b) ***Integration with Existing/Future Facility Operations*** | Easily integrated, since Site is unoccupied | Moderately integrated, since Site is unoccupied. | Moderately integrated, since Site is unoccupied. |
| c) **Operations, Monitoring, and Maintenance (OM&M) Requirements or Limitations** | Low OM&M measures required | Moderate to high OM&M measures required | Moderate to high OM&M measures required |
| d) ***Site Access Requirements or Limitations*** | Temporary access limitations during implementation | Temporary access limitations during implementation | Temporary access limitations during implementation |
| e) ***Availability of Services, Materials, Equipment or Specialists*** | Specialized materials, equipment, or specialists not required for implementation. | Specialized materials, equipment, or specialists will be required for implementation. | Specialized materials, equipment, or specialists will be required for implementation. |
| f) ***Availability, Capacity and Location of Offsite Treatment, Storage and Disposal Facilities*** | No level of capacity required | Moderate to high level of capacity required | Moderate level of capacity required |
| g) ***Meets Requirements for Required Permits or Licenses*** | Implementable | Implementable. | Implementable |
| **Implementation Ranking** | 4 | 2 | 3 |
| **4. Comparative Cost** | | | |
| a) ***Estimated Cost of Implementation (Design, Construction and Operation)*** | Total Est. Costs -Moderate to High-20-plus years of monitoring/reporting | Total Est. Costs - Low to Moderate-Short term | Total Est. Costs -Moderate to High-20-plus years of monitoring/reporting |
| b) ***Estimated Cost of Environmental Restoration*** | Included in above estimated cost calculations | Included in above estimated cost calculations | Included in above estimated cost calculations |
| c) ***Estimated Cost for Energy Resources*** | Included in above estimated cost calculations | Included in above estimated cost calculations | Included in above estimated cost calculations |
| **Comparative Cost Ranking** | 2 | 3 | 2 |
| **5. Risk** | | | |
| a) ***Short-term Risk During Implementation*** | Low short term risk as a result of the need for OM&M during implementation | Moderate short term risk as a result of the need for OM&M during implementation | Moderate short term risk as a result of the need for OM&M during implementation |
| b) ***On-site and Off-site Risk During Operation*** | Low during operation. | Moderate to high during operation. | Moderate during operation. |
| c) ***Potential Risk Associated with Remaining OHM*** | High risk, due to potential risk associated with exposure to shallow contaminated soils | Low risk, assuming OHM is contained/isolated and reduced/mitigated. | Moderate risk, since risk associated with exposure to contaminants during sampling |
| **Risk Ranking** | 2 | 4 | 3 |
| **6. Benefits** | | | |
| a) ***Restores Natural Resources*** | Does not restore natural resources | Reduces potentially negative impacts of OHM to natural resources. | Reduces some potentially negative impacts of OHM to natural resources. |
| b) ***Provides Productive Reuse of Site*** | Limits some productive use of portions of the Site for long-term. | Provides productive site reuse | Limits some productive use of portions of the Site for long-term. |
| **Benefit Ranking** | 2 | 5 | 3 |
| **7. Timeliness** | | | |
| a) **Estimated Duration to Achieve No Significant Risk** | Moderate to high | Moderate | Moderate to high |
| **Timeliness Ranking** | 1 | 4 | 1 |
| **8. Non-Pecuniary Interests** | | | |
| a) **Relative Effect on Aesthetic Value** | Low, since site remains unoccupied | Moderate | Moderate |
| **Non-Pecuniary Interests Ranking** | 1 | 3 | 3 |

**Notes:**

1. Rankings are comparative with the greatest number possible (5) being the most favorable and the lowest number possible (1) being the least favorable

**TABLE 2B**
**REMEDIAL ACTION ALTERNATIVES EVALUATION MATRIX**
**Courtois Sand & Gravel site**
**North Attleborough, MA**
**RTN 4-26386**

| Remedial Alternative | Description | Effectiveness | Reliability | Implementation | Cost | Risk | Benefits | Timeliness | Non-Pecuniary Interests | Total Score | Overall Ranking |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | No Remedial Action and Monitoring | 1 | 1 | 4 | 1 | 2 | 2 | 1 | 2 | **14** | Lowest ranking |
| 2 | Ex-Situ Technologies, Active Removal, Monitoring | 5 | 5 | 2 | 4 | 4 | 4 | 4 | 4 | **32** | Highest ranking |
| 3 | Institutional Controls, Passive Containment, Active Removal, Monitoring | 3 | 3 | 3 | 1 | 3 | 2 | 1 | 2 | **18** | Medium ranking |

**Notes:**

1. Rankings are comparative with the greatest number possible (5) being the most favorable and the lowest number possible (1) being the least favorable
2. Total Score = Sum of the individual rankings for the eight evaluation criteria

**TABLE 3A**
**COST ESTIMATE FOR REMEDIAL ACTION ALTERNATIVE NO. 1**
**No Remedial Action and Monitoring**
Courtois Sand & Gravel site
North Attleborough, Massachusetts
**4-26386**

| Task | Description | Estimated Quantity | Unit Cost | Estimated Cost |
|---|---|---|---|---|
| **INSTITUTIONAL CONTROLS** | | | | |
| **Engineering Costs** | | | | |
| LSP Services | AUL | 1 job | $7,000 | $7,000 |
| **Subtotal Engineering Costs** | | | | **$7,000** |
| ***TOTAL ESTIMATED ENGINEERING & CAPITAL COSTS-INSTITUTIONAL CONTROLS*** | | | | ***$7,000*** |
| | | | | |
| ***MONITORING*** | | | | |
| **Engineering Costs** | | | | |
| Engineering Services | Design, procurement, permitting | 10% of capital costs | | $1,000 |
| Regulatory Reporting | Status Reports (assume 2 biannual reports over 20 years) | 40 per period | $5,000 report | $200,000 |
| **Capital Costs** | | | | |
| Well installation | | | | $5,000 |
| Sampling Costs | Monitoring | 35 events | $5,000 event | $175,000 |
| **Subtotal Capital and Engineering Costs** | | | | **$381,000** |
| **Capital and Engineering Contingency** | | 25% of subtotal | | **$95,250** |
| **Project Management** | | 2% of subtotal | | **$7,620** |
| ***TOTAL ESTIMATED ENGINEERING & CAPITAL COSTS-MONITORING*** | | | | ***$483,870*** |
| | | | | |
| **TOTAL ESTIMATED COSTS-RAA-1** | | | | **$483,870** |

**Notes**

1. Assume quarterly events for years 1-5; biannual events for years 6-20
2. Additional monitoring may be required after 20 years, due to presence of source. Additional wells may be required to monitor plume.

**TABLE 3B**
**COST ESTIMATE FOR REMEDIAL ACTION ALTERNATIVE NO. 2**
**Ex-Situ Technologies, Active Removal, Monitoring**
Courtois Sand & Gravel site
North Attleborough, Massachusetts
**4-26386**

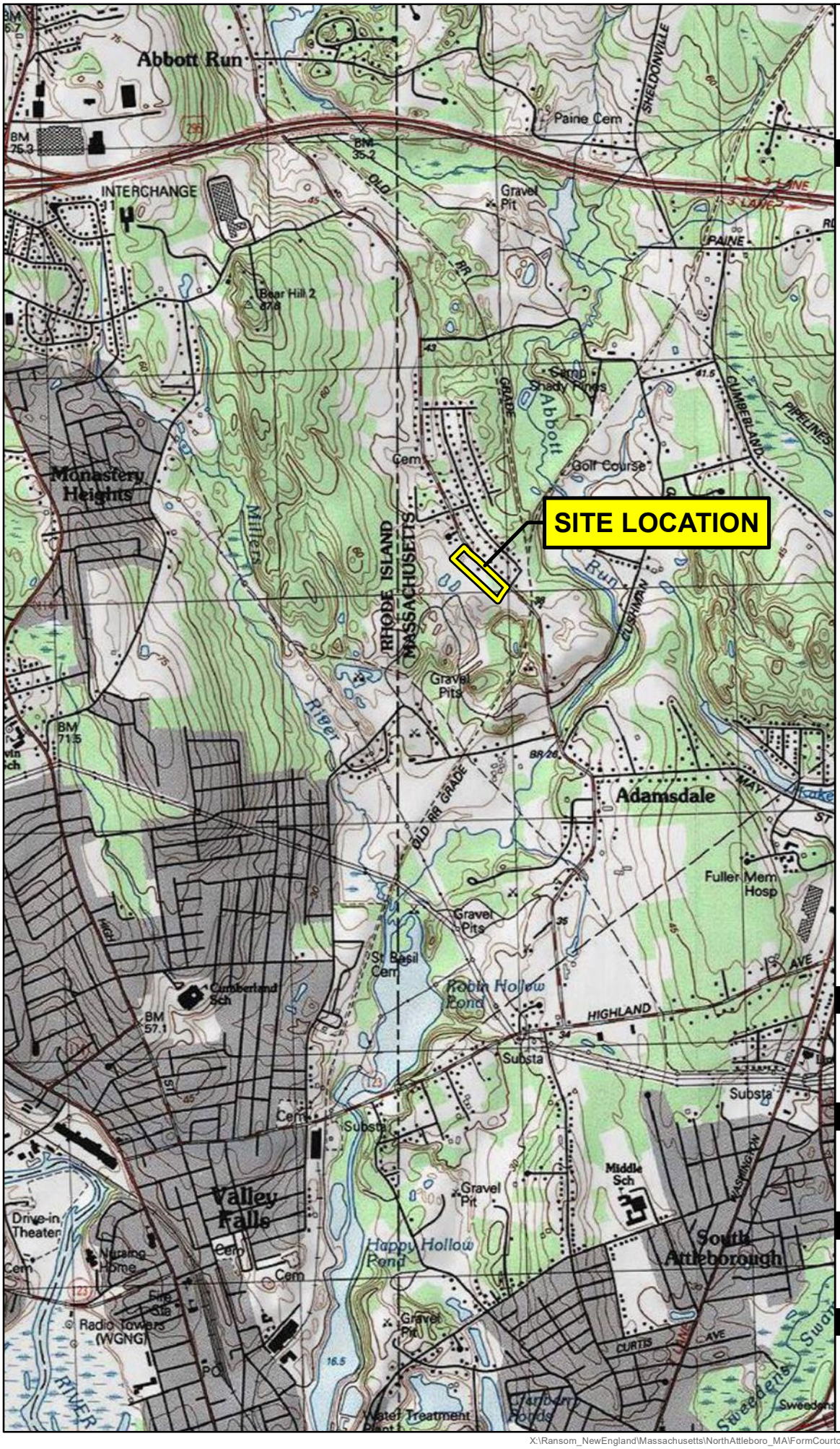
| Task | Description | Estimated Quantity | Unit Cost | Estimated Cost |
|---|---|---|---|---|
| **EX-SITU TECHNOLOGIES- Soil Excavation** | | | | |
| **Engineering and Capital Costs** | | | | |
| Design | Engineering Design | 1 job | $10,000 | $10,000 |
| Soil Excavation | Ex-Situ Removal | 1 job | $20,000 job | $20,000 |
| Cleanup Oversight | | 5 days | $1,500 day | $7,500 |
| Regulatory Reporting | LSP Services/MCP Reporting | 1 job | $10,000 | $10,000 |
| Transportation/Disposal | Non-hazardous | 400 ton | $95 ton | $38,000 |
| Clean backfill | | 400 ton | $20 ton | $8,000 |
| **Subtotal Engineering and Capital Costs** | | | | **$85,500** |
| **Engineering and Capital Contingency** | | 10% of subtotal | | **$8,550** |
| **Project Management** | | 2% of subtotal | | **$1,000** |
| ***TOTAL ESTIMATED ENGINEERING & CAPITAL COSTS-EX-SITU TECHNOLOGIES*** | | | | ***$100,000*** |
| | | | | |
| **Active Removal** | | | | |
| **Engineering and Capital Costs** | | | | |
| Building Demolition | Engineering Design | 1 job | $80,000 | $80,000 |
| Cleanup Oversight | | 10 days | $1,500 day | $15,000 |
| Containerized waste disposal | | 200 gals | $3 gal | $600 |
| Tank/vessel/piping removal and disposal | | 1 job | $5,000 job | $5,000 |
| **Subtotal Engineering and Capital Costs** | | | | **$100,600** |
| **Engineering and Capital Contingency** | | 10% of subtotal | | **$10,060** |
| **Project Management** | | 2% of subtotal | | **$2,012** |
| ***TOTAL ESTIMATED ENGINEERING & CAPITAL COSTS-IN-SITU TECHNOLOGIES*** | | | | ***$113,000*** |
| | | | | |
| ***MONITORING*** | | | | |
| **Engineering Costs** | | | | |
| Engineering Services | Design, procurement, permitting | 10% of capital costs | | $1,400 |
| Regulatory Reporting | LSP Services/MCP Reporting | | | $8,000 |
| **Capital Costs** | | | | |
| Monitoring | Sampling and analysis | 1 events | $5,000 | $5,000 |
| **Subtotal Capital and Engineering Costs** | | | | **$14,400** |
| **Capital and Engineering Contingency** | | 10% of subtotal | | **$1,440** |
| **Project Management** | | 2% of subtotal | | **$288** |
| ***TOTAL ESTIMATED ENGINEERING & CAPITAL COSTS-MONITORING*** | | | | ***$16,000*** |
| | | | | |
| **TOTAL ESTIMATED COSTS-RAA-2** | | | | **$229,000** |

**TABLE 3C**
**COST ESTIMATE FOR REMEDIAL ACTION ALTERNATIVE NO. 3**
**Institutional Controls, Passive Containment, Active Removal, Monitoring**
Courtois Sand & Gravel site
North Attleborough, Massachusetts
**4-26386**

| Task | Description | Estimated Quantity | Unit Cost | Estimated Cost |
|---|---|---|---|---|
| **INSTITUTIONAL CONTROLS** | | | | |
| **Engineering Costs** | | | | |
| LSP Services | AUL | 1 job | $7,000 | $7,000 |
| **Subtotal Engineering Costs** | | | | **$7,000** |
| ***TOTAL ESTIMATED ENGINEERING & CAPITAL COSTS-INSTITUTIONAL CONTROLS*** | | | | ***$7,000*** |
| | | | | |
| **Passive Horizontal Containment** | | | | |
| **Engineering Costs** | | | | |
| Engineering Services | Design, procurement, permitting | 10% of capital costs | | $5,000 |
| Regulatory Reporting | | 1 reports | $5,000 report | $5,000 |
| **Capital Costs** | | | | |
| Installation | Assume 1500 SF building | 1,500 SF | $10 SF | $15,000 |
| **Subtotal Capital and Engineering Costs** | | | | **$25,000** |
| **Capital and Engineering Contingency** | | 10% of subtotal | | **$2,500** |
| **Project Management** | | 2% of subtotal | | **$500** |
| ***TOTAL ESTIMATED ENGINEERING & CAPITAL COSTS-PASSIVE HORIZONTAL CONTAINMENT*** | | | | ***$28,000*** |
| | | | | |
| **Active Treatment (SSD System)** | | | | |
| **Engineering Costs** | | | | |
| Engineering Services | Design, procurement, permitting | 10% of capital costs | | $1,000 |
| Regulatory Reporting | Status Reports | 4 reports | $4,000 report | $16,000 |
| **Capital Costs** | | | | |
| Installation | Assume 1500 SF building | 1,500 SF | $20 SF | $30,000 |
| OM&M | Monitoring | 35 events | $4,000 event | $140,000 |
| **Subtotal Capital and Engineering Costs** | | | | **$47,000** |
| **Capital and Engineering Contingency** | | 10% of subtotal | | **$4,700** |
| **Project Management** | | 2% of subtotal | | **$940** |
| ***TOTAL ESTIMATED ENGINEERING & CAPITAL COSTS-ACTIVE TREATMENT*** | | | | ***$52,640*** |
| | | | | |
| ***MONITORING*** | | | | |
| **Engineering Costs** | | | | |
| Engineering Services | Design, procurement, permitting | 10% of capital costs | | $1,000 |
| Regulatory Reporting | Status Reports (assume 2 biannual reports over 20 years) | 40 per period | $5,000 report | $200,000 |
| **Capital Costs** | | | | |
| Well rinstallation | | | | $5,000 |
| Sampling Costs | Monitoring | 35 events | $5,000 event | $175,000 |
| **Subtotal Capital and Engineering Costs** | | | | **$381,000** |
| **Capital and Engineering Contingency** | | 25% of subtotal | | **$95,250** |
| **Project Management** | | 2% of subtotal | | **$7,620** |
| ***TOTAL ESTIMATED ENGINEERING & CAPITAL COSTS-MONITORING*** | | | | ***$483,870*** |
| | | | | |
| **TOTAL ESTIMATED COSTS-RAA-3** | | | | **$571,510** |

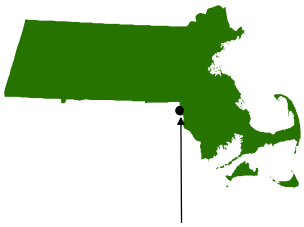
**Notes**

1. Cost estimates for vapor barrier and SSD system obtained here:
   http://www.itrcweb.org/PetroleumVI-Guidance/Content/Appendix%20J.%20Vapor%20Intrusion%20Control.htm
2. Assume quarterly events for years 1-5; biannual events for years 6-20




RANSOM
Consulting Engineers and Scientists

## Regional Locator Map



North Attleborough

Notes

1. Data Source: USGS National Map Seamless Server, 24K DRG, 1/3" NED
2. USGS Quad Names: Pawtucket and Attleboro, Massachusetts
3. Latitude: 41° 55' 52" N
   Longitude: 71° 22' 39" W
   UTM Northing: 4644865 mN
   UTM Easting: 302874 mE

## Scale and Orientation

0 1,000 2,000

1 inch = 2,000 feet

## Prepared For

Town of North Attleborough
43 South Washington Street
North Attleborough,
Massachusetts

## Site Address

Former Courtois Sand and Gravel Site
230 Mendon Road - Parcel 29-12
North Attleborough, Massachusetts

181.02025 | April 2019

# Figure 1

Site Location Map

X:\Ransom_NewEngland\Massachusetts\NorthAttleboro_MA\FormCourtoisProp\Courtois_NorthAttleborough_MA_F1-SLM.mxd


N

***LEGEND:***

- SITE BOUNDARY
- EROSION CONTROLS
- APPROXIMATE SOIL EXCAVATION AREA
- TEMPORARY CONSTRUCTION FENCE
- FORMER SITE FEATURE
- STABILIZED CONSTRUCTION ENTRANCE

***NOTES:***

1. SITE PLAN BASED ON GOOGLE EARTH, AERIAL IMAGERY DATED FEBRUARY 26, 2018.
2. SOME FEATURES ARE APPROXIMATE IN LOCATION AND SCALE.
3. THIS PLAN HAS BEEN PREPARED FOR THE TOWN OF NORTH ATTLEBOROUGH. ALL OTHER USES ARE NOT AUTHORIZED UNLESS WRITTEN PERMISSION IS OBTAINED FROM RANSOM CONSULTING, INC.

0' 30' 60' 120'

SCALE in FEET
1"=60'

RANSOM Consulting, Inc.

PREPARED FOR:

TOWN OF NORTH ATTLEBOROUGH
43 SOUTH WASHINGTON STREET
NORTH ATTLEBOROUGH, MASSACHUSETTS

SITE:

FORMER COURTOIS SAND AND GRAVEL SITE
230 MENDON ROAD: PARCEL 29–12
NORTH ATTLEBOROUGH,
MASSACHUSETTS

# *SITE PLAN*

DATE: MARCH 2019
PROJECT: 181.02025
FIGURE: 2

**APPENDIX A**

ABCA Public Meeting Notice and Proof of Publication

Analysis of Brownfields Cleanup Alternatives (ABCA)
Courtois Sand & Gravel site
230 Mendon Road
North Attleborough, Massachusetts
MassDEP Release Tracking No. (RTN) 4-26386

## LEGALS

Anh Tam Noo

**Commonwealth of Massachusetts**
**The Trial Court**
**Probate and Family Court**
**NOTICE AND ORDER:**
**PETITION for Appointment of Guardian of a Minor**
Docket No.
**BR19P1297GD**

Bristol Probate and Family Court
Office of Register Suite 240
40 Broadway
Taunton MA, 02780

NOTICE TO ALL INTERESTED PARTIES

1. **Hearing Date/Time:** A hearing on a Petition for Appointment of Guardian of a Minor filed on **6/11/2019** by **Mau T Do** of Attleboro, MA
   will be held **8/22/2019 08:30 AM Review Hearing**
   Located **40 Broadway, Taunton**
2. **Response to Petition:** You may respond by filing a written response to the Petition or by appearing in person at the hearing. If you choose to file a written response, you need to:
   File the original with the Court; and
   Mail a copy to all interested parties at least five (5) business days before the hearing.
3. **Counsel for the Minor:** The minor (or an adult on behalf of the minor) has the right to request that counsel by appointed for the minor.
4. **Counsel for Parents:** If you are a parent of the minor child who is the subject of this proceeding you have a right to be represented by an attorney. If you want an attorney and cannot afford to pay for one and if you give proof that you are indigent, an attorney will be assigned to you. Your request for an attorney should be made immediately by filling out the Application of Appointment of Counsel form. Submit the application form in person or by mail at the court location where your case is going to be heard.
5. **Presence of the Minor at Hearing:** A minor over age 14 has the right to be present at any hearing, unless the Court finds that it is not in the minor's best interests.
   **THIS IS A LEGAL NOTICE:** An important court proceeding that may affect your rights has been scheduled. If you do not understant this notice or other court papers, please contact an attorney for legal advice.
   Date: June 12, 2019
   Jason Caton, Register of Probate
   June 28, 2019

## LEGALS

Hyde

**TOWN OF SEEKONK**
**CONSERVATION COMMISSION**
**PUBLIC MEETING**

The Conservation Commission, in accordance with Mass. Gen. Law Ch. 131, §40 and the Seekonk Wetland Protection Bylaw, will open a PUBLIC HEARING at the Seekonk Town Hall on **MONDAY, July 8, 2019** after **7:30 p.m. on an Notice of by Hyde Development, LLC** at **65 Windham Shire Dr, (AP 10, Lot 282)** for proposed construction of a single family dwelling and associated grading within jurisdictional resource areas, including crossing a bordering vegetated wetland and accompanying wetland replication area.
Plans are available for review at the Seekonk Conservation Office.
To make an appointment, please call (508) 336-2944.
06/28/2019

## LEGALS

Gulinello

**Commonwealth of Massachusetts**
**The Trial Court**
**Probate and Family Court**
**Norfolk Division**
**INFORMAL PROBATE**
**PUBLICATION NOTICE**
**Docket No. 19P1316EA**

**Estate of: Arcangela Marie Gulinello**
**Date of Death: March 23, 2019**

To all persons interested in the above captioned estate, by Petition of
Petitioner Joan R Gulinello of Norfolk MA
a Will has been admitted to informal probate.
Joan R Gulinello of Norfolk MA
has been informally appointed as the Personal Representative of the estate to serve without surety on the bond.
The estate is being administered under informal procedure by the Personal Representative under the Massachusetts Uniform Probate Code without supervision by the Court. Inventory and accounts are not required to be filed with the Court, but interested parties are entitled to notice regarding the administration from the Personal Representative and can petition the Court in any matter relating to the estate, including distribution of assets and expenses of administration. Interested parties are entitled to petition the court to institute formal proceedings and to obtain orders terminating or restricting the powers of Personal Representatives appointed under informal procedure. A copy of the Petition and Will, if any, can be obtained from the Petitioner.
06/28/2019

## LEGALS

Fences

This is to notify you that an application has been made to the Inspector of Buildings by:
**Sarah Lewis for a 4ft chain link fence at 156 Handy St., Attleboro, MA 02703**
**Taylor Larson for a 4ft vinyl & chain link fence at 87 Thatcher St., Attleboro, MA 02703**
**Lisa West for a 6ft vinyl fence at 38 Sargent Cir., Attleboro, MA 02703**
The decision of the Inspector of Buildings to issue a fence permit may be appealed to the Zoning Board of Appeals in accordance with the provisions of the Revised Ordinances of the City of Attleboro Section 17-8.8 Appeals.

Monique Kennedy
Principal Clerk
06/28/2019

## LEGALS

Gomez

**TOWN OF SEEKONK**
**CONSERVATION COMMISSION**
**PUBLIC MEETING**

The Conservation Commission in accordance with Mass. Gen. Law Ch. 131,§40 and the Seekonk Wetland Protection Bylaws will open a **PUBLIC MEETING** at the Seekonk Town Hall on **MONDAY, JULY 8, 2019** after **7:30 p.m.** on a **Request for Determination of Applicability by Oscar Gomez for 212 Burnside Ave. (Map38/Lot 161)** for proposed irrigation well and construction of a 10' x 20' shed within jurisdictional resource areas.

Plans are available for review at the Seekonk Conservation Office. Please call (508)336-2944 to make an appointment
06/28/2019

## LEGALS

Mastropietro

**TOWN OF SEEKONK**
**CONSERVATION COMMISSION**
**PUBLIC MEETING**

The Conservation Commission in accordance with Mass. Gen. Law Ch. 131, §40 and the Seekonk Wetland Protection Bylaws will open a PUBLIC MEETING at the Seekonk Town Hall on MONDAY, July 8, 2019 after 7:30 p.m. on a Request for Determination of Applicability by Bernard Mastropietro for 14 Rose Ann Ct. (Map 16/Lot 177) for construction of a post and rail fence within jurisdictional wetland areas.
Plans are available for review at the Seekonk Conservation Office. Please call (508) 336-2944 to make an appointment.
06/28/2019

## LEGALS

**Section 00.11.50 ADVERTISEMENT TO BID**

The North Attleborough Housing Authority, the Awarding Authority, invites sealed bids from General Contractors for the 667-1 Window Replacement, #197120 in North Attleborough, Massachusetts, in accordance with the documents prepared by RGB Architects, Inc.
The Project consists of: Replacing the existing wood aluminum clad double-hung windows in the living rooms and bedrooms of the residential units with new vinyl windows. Window replacement includes the Community Center and lower level workshop in the same building.
The work is estimated to cost $190,000.
Bids are subject to M.G.L. c.149 §44A-J & to minimum wage rates as required by
M.G.L. c.l49 §§26 to 27H inclusive.
**THIS PROJECT IS BEING ELECTRONICALLY BID AND HARD COPY BIDS WILL NOT BE ACCEPTED.** Please review the instructions in the bid documents on how to register as an electronic bidder. The bids are to be prepared and submitted at www.biddocsonline.com . Tutorials and instructions on how to complete the electronic bid documents are available online (click on the Tutorial tab at the bottom footer).
DCAMM Certification Requirements: **For projects with an estimated construction cost of over $100,000**, by DHCD contractual requirement, General Bidders must be certified by the Division of Capital Asset Management and Maintenance (DCAMM), according to Article 2.1 in Section 00.21.50 Instructions to Bidders, in the following category of work, **General Building Construction**. No Filed Sub Bids are required.
General Bids will be received until **10:00 AM** on **Tuesday, 23 July 2019** and publicly opened online, forthwith.
All Bids should be submitted online at www.biddocsonline.com and received no later than the date and time specified above.
General bids shall be accompanied by a bid deposit that is not less than five (5%) of the greatest possible bid amount (considering all alternates), and made payable to the **North Attleborough Housing Authority.**
Bid Forms and Contract Documents will be available for pick-up at www.biddocsonline.com (may be viewed electronically and hardcopy requested) or at Nashoba Blue, Inc. at 433 Main Street, Hudson, MA 01749 (978-568-1167).
There is a plan deposit of $50.00 per set (maximum of 2 sets) payable to BidDocs ONLINE Inc.
Plan deposits may be electronically paid or by check. This deposit will be refunded for up to two sets for general bidders and for one set for sub-bidders upon return of the sets in good condition within thirty (30) days of receipt of general bids. Otherwise the deposit shall be the property of the AwardingAuthority.

Additional sets may be purchased for $50.00
Bidders requesting Contract Documents to be mailed to them shall include a separate check for $40.00 per set for UPS Ground (or $65.00 per set for UPS overnight), non-refundable, payable to the BidDocs ONLINE Inc., to cover mail handling costs.
PRE-BID CONFERENCE / SITE VISIT:
Date and Time: Tuesday, 2 July 2019 at 10:00 AM
Address: 667-1 Circle Court; Community Building, Community Room, North Attleborough
Instructions:
SITE VISIT BY APPOINTMENT: NONE

The Contract Documents may be seen, but not removed at:

North Attleborough Housing Authority
20 South Washington Street North Attleborough, MA 02761
508-695-5142

Nashoba Blue Inc. 433 Main Street
Hudson, MA 01749
978-568-1167
06/25,28/2019

## LEGALS

Maroun

**Commonwealth of Massachusetts**
**The Trial Court**
**Probate and Family Court**
**Bristol Probate and Family Court**
**Office of Register Suite 240**
**40 Broadway**
**Taunton, MA 02780**
**(508) 977-6040**

**CITATION ON**
**PETITION TO CHANGE NAME**
**Docket No. BR19C0167CA**

The the matter of: Sadie George Maroun

A Petition to Change Name of Adult has been filed by
Sadie George Maroun of Attleboro MA
requesting that the court enter a Decree changing their name to:
Cecelia Sadie Pierce

IMPORTANT NOTICE
Any person may appear for purposes of objecting to the petition by filing an appearance at: Bristol Probate and Family Court before 10: a.m. On the return day of 07/26/2019. This is NOT a hearing date, but a deadline by which you must file a written appearance if you object to this proceeding.

WITNESS, Hon. Katherine A Field, First Justice of this Court.
Date: June 19,2019
Jason Caton, Register of Probate
06/28/2019

## LEGALS

Brownfields

**PUBLIC NOTICE**
Draft Analysis of Brownfields Cleanup Alternatives (ABCA) Public Meeting
Former Courtois Sand & Gravel Site-Parcel 29-12
230 Mendon Road, North Attleborough, MA
A public meeting will be held on July 10, 2019 to commence the 30-day public review and comment period of the Draft ABCA for Cleanup of Parcel 29-12 of the Former Courtois Sand & Gravel site, located at 230 Mendon Road in North Attleborough, Massachusetts. The Town of North Attleborough was awarded a FY2018 EPA Brownfields Cleanup grant for cleanup of petroleum contamination at the site.
The Draft ABCA is available for review by appointment at North Attleborough Town Hall, Town Administrators Office, 43 South Washington Street, N. Attleborough, MA 02760 during business hours: Mon.-Wed.: 8:0 AM to 4:00 PM, Thurs: 8:00 AM to 6:00 PM and Friday, 8:00 AM to 12:00 PM. Copies of the ABCA will be available at the public meeting.
The spokesperson representing the cleanup is Lyle Pirnie, Economic Development Coordinator, who can be reached in person by appointment at the above address, by email at lpirnie@nattleboro.com and by phone at (508) 699-0100.
The public meeting will be held on Wednesday, July 10, 2019 at 6:00 P.M. at North Attleborough Town Hall in the Lower Level Conference Room, located on the ground floor.
06/28/2019

## LEGALS

Tobacco

**TOWN OF NORFOLK**
**BOARD OF HEALTH**
**LEGAL NOTICE**

On June 18, 2019, the Norfolk Board of Health voted to enact a regulation entitled Regulation of the Norfolk Board of Health Restricting the Sale of Tobacco Products". The regulation includes, but is not limited to, prohibiting the sale of flavored tobacco products, except in smoking bars and adult-only tobacco stores. The regulation will go into effect on August 1, 2019. For a copy of these regulations, please visit the Town of Norfolk website at http://norfolk.ma.us/assets/files/6.18.19-tobacco-regs.pdf or in the Board of Health Office of the Municipal Building during regular business hours.

For the Board,
Thomas R. Gilbert
Chairman
06/28/2019

## LEGALS

Madeira

**TOWN OF SEEKONK**
**CONSERVATION COMMISSION**
**PUBLIC MEETING**

The Conservation Commission in accordance with Mass. Gen. Law Ch. 131, §40 and the Seekonk Wetland Protection Bylaws will open a **PUBLIC HEARING** at the Seekonk Town Hall on **MONDAY, July 8th, 2019** after **7:30 p.m.** on a **Notice of Intent made by Madeira Ventures, Inc. for Palmer River Rd (Map 17/Lots 192, 198-200, 203 and Palmer River Rd, formerly a portion of Lot 79)** for a request to amend the Orders of Conditions on Notice of Intent #SE69-0852 to change the stormwater treatment system by eliminating the bio-retention basin in the cul-de-sac roadway and adding a stormceptor unit.
Plans are available for review at the Seekonk Conservation Office.
To make an appointment, please call (508) 336-2944.
06/28/2019

**APPENDIX B**

ABCA Public Meeting/Neighborhood Meeting Sign-in Sheet
[pending July 10, 2019 meeting]

Analysis of Brownfields Cleanup Alternatives (ABCA)
Courtois Sand & Gravel site
230 Mendon Road
North Attleborough, Massachusetts
MassDEP Release Tracking No. (RTN) 4-26386