ANALYSIS OF BROWNFIELDS CLEANUP ALTERNATIVES & CONCEPTUAL REMEDIAL ACTION PLAN
29 BELMONT AVENUE
(FORMER EXXON STATION)
BELFAST, MAINE

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1.0 INTRODUCTION AND BACKGROUND

Ransom Consulting, Inc. (Ransom) has completed this Analysis of Brownfields Cleanup Alternatives (ABCA) to evaluate various remedial alternatives for the previously identified adverse environmental conditions throughout portions of the former Exxon Station property located at 29 Belmont Avenue in Belfast, Maine (the "Site"). This report summarizes the evaluation of remedial alternatives for the Site and includes a discussion of each remedial option, a cost estimate, the degree of effectiveness, and the ease of implementation for each remedial alternative. This report also contains a discussion of the recommended remedial alternative for the Site, as well as a Conceptual Remedial Action Plan (RAP) for the selected alternative.

1.1 Purpose and Scope

The purpose of this report is to screen potential remedial action alternatives to mitigate previously identified adverse environmental conditions associated with the Site. Based on the information obtained during previous environmental investigations (summarized in Section 2.0), including Phase I and Phase II Environmental Site Assessments (ESAs), three remediation options were considered for the Site and evaluated based on feasibility, effectiveness, cost, required time schedule, and ability to meet the overall cleanup goal (protection of human health and the environment). Key consideration was given to eliminating or reducing, to the extent possible, the risk of exposure for existing and potential future Site occupants, Site workers, and trespassers to the identified contamination at the Site.

The overall objectives of this ABCA include the following:

1. Evaluating the remedial alternatives against specific evaluation criteria, including: overall protection of human health and the environment; technical practicality; ability to implement; reduction of toxicity, mobility, and volume; time required until remedial action objectives are attained; and costs.

2. Selecting the remedial alternative that best meets the objectives and considerations of the project.

3. Presenting a work plan (RAP) for implementing the selected remedial alternative.

Remediation alternatives evaluated in this ABCA include a "No Action" alternative, a "Soil Removal" alternative, and a "Limited Soil Removal and Soil Cover" alternative. The Evaluation of Remediation Alternatives (Section 5.0) discusses the requirements for each alternative. The alternatives are evaluated on the previously mentioned criteria, and one alternative is recommended for implementation at the Site. Furthermore, a Conceptual RAP is presented in Section 6.0 for the recommended alternative.

1.2 Site Description

The former Exxon Station property is located at 29 Belmont Avenue in the City of Belfast, Waldo County, Maine and is currently owned by Eighty One Eutaw, LLC. Refer to the attached Site Location Map (Figure 1) to view the general location of the Site in the context of a 7.5-minute topographic quadrangle. The Site consists of rectangular-shaped parcel of land encompassing approximately 0.76 acres located along the northern side of Belmont Avenue, approximately 800 feet west of the intersection of Belmont Avenue and Hatley Road. The Site is identified by the City of Belfast Assessor's Office as Tax Map 5, Lot 16B.

The Site is located in a primarily highway-commercial area of Belfast, although the properties abutting the Site are currently vacant or residential. The Site is located within the "RT-3" zone (Route 3 Commercial District), as designated by the City of Belfast. The Site is currently abutted to the north by vacant land, formerly occupied by the Boynton Bulk Fuel Oil Facility, and to the south by Belmont Avenue (Route 3), across which lies the EBS Building Supply Retail Store. The current abutting properties to the east and west of the Site are used for residential purposes (25 and 33 Belmont Avenue, respectively). Furthermore, the Site is bounded to the east by a small unnamed stream, which originates from wetland areas located to the northeast of the Site, and flows to the south, passing under Belmont Avenue.

The Site currently exists as vacant, unimproved land. According to information obtained during the Phase I ESA, the Site has been vacant since 1998. A former filling station and automobile repair building, constructed circa 1956, was demolished in 2003, and the Site has remained unimproved since that time.

Limited asphalt paving exists on the southern portion of the property adjacent to Belmont Avenue. Overhead electrical lines, transecting the Site from Belmont Avenue, connect to a telephone pole in the center of the Site and provide electricity to the neighboring property to the north. Municipal sewer and water utilities are available to the Site and vicinity. A sewer pump station structure and associated features are located adjacent to Belmont Avenue and the unnamed stream to the east of the Site. According to information provided by the City of Belfast, these features are reportedly owned and operated by the Belfast Sewer District, and are located on the adjacent parcel to the east of the Site, which includes the unnamed stream. In addition, a 20-foot wide easement runs north-south along the eastern side of the Site, and provides parcel and street access for the abutting property to the north (Map 5, Lot 16C).

1.3 Surrounding Land Use

General land use in the vicinity of the Site is a mix of residential, commercial (along Rt.3), and unimproved land. The Site is bordered to the north by the former Boynton Bulk Fuel Facility (currently vacant), which was the site of a release of approximately 3,200 gallons of fuel oil in 1990. In addition to the abutting residential and commercial properties, several nearby commercial/retail properties are located along Belmont Avenue (Rt. 3), particularly toward the east of the Site and the Rt. 1 bypass.

1.4 Potential Future Site Use

The potential future use of the Site is not fully defined at this time, but it is expected to be redeveloped as commercial (retail and/or office) space.

1.5 Site Geology

Soils encountered at the Site during the Phase II ESA were generally characterized by approximately 2 feet of sand and gravel fill material, which was underlain by native glacial-marine clay. The glacial-marine clay material extended to depths ranging from approximately 8 to 12 feet below ground surface (bgs), and, in some areas, appeared to be underlain by glacial till material. Sand and gravel fill material, likely associated with the former underground storage tank (UST) removals, was encountered in soil borings B103, B104, B106, and B111 (refer to Figure 2) at depths ranging from approximately 4 to 12 feet bgs. Apparent groundwater was encountered in the soil borings at highly variable depths, ranging from approximately 4 to 12 feet bgs. The wide range in apparent groundwater depths is likely attributable

to the presence or absence of the glacial-marine clay, which restricted the movement/availability of groundwater when present.

Field screening of the soil samples collected from the soil borings generally did not indicate organic vapor concentrations in excess of background conditions with the following exceptions:

- Organic vapors were detected at a concentration of 256 parts per million by volume (ppmv) in the soil sample collected from soil boring B101 (location of former gasoline pumps) at a depth of 4 to 6 feet bgs.

- Organic vapors were detected at concentrations of 4.0, 6.2, and 6.8 ppmv in soil boring B107 at depths ranging from 0 to 8 feet bgs. Surficial soils in the area of this soil boring exhibited a waste oil odor.

No evidence of "petroleum-saturated soils" or evidence of "free petroleum product" contamination was observed in soils or groundwater encountered during soil boring advancement or gauging of temporary groundwater monitoring wells.

1.6 Site Hydrology

Concurrent with the Phase II investigation in 2012, a relative groundwater elevation survey was conducted in order to evaluate the local groundwater flow direction at the Site. Groundwater was measured at depths ranging from 4.02 to 5.04 feet bgs in monitoring wells MW101, MW102, and MW104. Groundwater was not initially observed to accumulate in MW103, and only a small amount of water was observed in this well after the well was allowed to equilibrate for a period of time. It is Ransom's opinion that the groundwater level recorded in monitoring well MW103 was not representative of the actual groundwater elevation; therefore, water level data from this well was not used for groundwater flow direction determination.

Based on the depth to water recorded in wells MW101, MW102, and MW104 during the July 2012 sampling round, relative groundwater elevations were calculated as shown in the following table. The data indicates a hydraulic gradient and associated interpreted groundwater flow direction to the south.

RESULTS OF GROUNDWATER ELEVATION SURVEY

Well	Depth to Groundwater (feet bgs)	Relative Ground Elevation	Relative Groundwater Elevation
MW101	5.04	101.03	95.99
MW102	4.02	100.05	96.03
MW104	4.16	101.59	97.43

Notes:

1. Relative groundwater elevation survey and groundwater measurements conducted by Ransom on July 25, 2012.
2. Elevations are relative to arbitrary benchmark with an assigned elevation of 100.00 feet.

2.0 PREVIOUS ENVIRONMENTAL INVESTIGATIONS

Phase I and II ESAs were prepared by Ransom in 2012 and are summarized below. In addition, previous investigations of the Site include three environmental site assessment reports prepared in 1997, 1998, and 2002, and one assessment of the Boynton Bulk Fuel Facility (2006), which neighbors the Site to the north. Environmental investigations conducted prior to 2012 are summarized in Ransom's Phase I ESA previously submitted to the Town of Belfast and the Maine Department of Environmental Protection (MEDEP).

"Phase I Environmental Site Assessment: 29 Belmont Avenue (Former Exxon Station), Belfast, Maine." Ransom Consulting, Inc., May 15, 2012.

In May of 2012, Ransom prepared a Phase I ESA for the Site. Ransom reviewed the historical uses of the Site and surrounding properties and reviewed MEDEP databases for information pertaining to releases occurring at or near the Site. According to historical records and information obtained from previous owners of the Site, three gasoline USTs (with volumes of 2,000 gallons, 3,000 gallons, and 4,000 gallons) were historically maintained on the Site located to the southeast of the former Site building. These three USTs were installed in 1956 and subsequently replaced in 1984 with three registered USTs (Facility Registration Number 2053), which were also used for the storage of gasoline. The registered USTs were reportedly installed in the same area as the original generation of USTs and consisted of one 6,000-gallon UST and two 4,000-gallon USTs. Reportedly, the Site was never used to store or dispense diesel fuel. Waste oil generated during automotive repair activities was reportedly stored in an above ground storage tank (AST) on the northern side of the former building, and was periodically collected for off-site disposal. The former filling station ceased operation in 1998, the gasoline USTs were removed in 2002, and the former building was demolished in 2003.

Based on the information obtained during the Phase I ESA, Ransom identified the following *recognized environmental conditions* (RECs) in connection with the Site:

1. Documented soil and groundwater contamination resulting from historic petroleum storage and releases at the Site and the neighboring bulk fuel facility. During UST replacement and removal operations, contamination in excess of historic cleanup guidelines was reportedly backfilled and/or left in place at the Site, as well as at the upgradient bulk fuel facility. Petroleum contaminants likely remaining at the Site and neighboring bulk fuel facility have the potential to represent an environmental risk to human health and the environment, depending on future Site use and/or redevelopment.

2. Historic automotive repair activities and the historic on-site septic system have the potential to have impacted the environmental conditions at the Site with waste petroleum products, parts cleaners, degreasers, and other automotive fluids. These contaminants may also represent a risk to human health and/or the environment, depending on future Site use and/or redevelopment.

Ransom further recommended the development of a Site-Specific Quality Assurance Project Plan and implementation of a Phase II ESA to characterize potential Areas of Concern.

"Phase II Environmental Site Assessment: 29 Belmont Avenue (Former Exxon Station)," Ransom Consulting, Inc., November 26, 2012.

In November, 2012, Ransom completed a Phase II ESA for the Site. The results of the Phase II ESA indicate that limited residual petroleum contamination associated with the former UST systems remains within the southeastern portion of the Site. In addition, likely impacts from former automobile repair activities were also detected in one area of the Site, located on the northern side of the former gas station building.

The majority of the petroleum contamination associated with the former UST systems was identified in the area of the former fuel dispensers, along the southern portion of the Site. Contaminant concentrations identified in soil samples collected from within the former gasoline dispenser areas did not exceed their applicable MEDEP Remedial Action Guidelines (RAGs) or Petroleum Remediation Guidelines for the proposed exposure/reuse scenarios. No soil contaminants were detected at concentrations above corresponding laboratory reporting limits in the area of the former USTs. However, petroleum compounds and arsenic were detected in the soil sample collected from the northern side of the former Site building at concentrations that exceed their applicable MEDEP RAGs and/or Petroleum Remediation Guidelines for "Outdoor Commercial Worker" and "Excavation/Construction Worker" exposure scenarios. Contaminated soil in this area is estimated to extend to a depth of approximately 6 to 8 feet and appears limited in lateral extent.

Residual contaminants of concern (COCs) appear to remain in groundwater in the area of the former fuel dispensers, including benzene, ethylbenzene, naphthalene, and volatile petroleum hydrocarbon (VPH) fractions. Soil vapor samples collected from the Site also indicate residual contamination in the form of ethylbenzene and air-phase hydrocarbons (APH).

Based on the findings and information obtained during the Phase II ESA, Ransom recommended the following with respect to the existing environmental conditions at the Site and the proposed Site redevelopment:

1. The Site should be submitted to the MEDEP Voluntary Response Action Program (VRAP) to obtain state liability protections for interested parties including a "No Action Assurance" letter and a "Certificate of Completion" letter (i.e. no further action required). Procurement of these documents is contingent upon completion of proper and appropriate environmental cleanup or remedial actions, as approved by the MEDEP;

2. A Soil and Groundwater Management Plan should be developed in order to insure proper handling and management of identified petroleum-impacted soils and groundwater, which may be encountered during redevelopment of the Site property.

3. The risk of human exposure to slightly elevated concentrations of limited petroleum compounds and metals (specifically arsenic) identified in soil and/or soil vapor at the Site should be mitigated. As such, Ransom recommends the completion of an ABCA and Conceptual RAP or Focused Feasibility Study (FFS) to evaluate and select the most appropriate cleanup or remedial action(s) for the Site. Soil mitigation measures to prevent exposure to the identified contamination may include relatively simple engineering controls consisting of the placement of a soil cover system or other direct barrier system (e.g., pavement, concrete, building foundations) to prevent direct dermal contact with the identified contaminated surficial and subsurface soils and/or a deed

restriction and institutional controls in the form of a Declaration of Environmental Covenant (DEC); and

4. A vapor barrier and/or passive sub-slab depressurization system should also be incorporated into the design of any new proposed Site structures to mitigate impacts to indoor air quality from potential vapor intrusion of volatile petroleum-related compounds identified in soil vapor samples collected at the Site. Vapor mitigation systems are similar to and/or analogous to radon mitigation systems and are relatively easy to install and incorporate into the design of new building foundations.

3.0 SITE CHARACTERIZATION AND CLEANUP GOALS

Previous environmental investigations completed at the Site identified residual environmental contamination associated with historic Site operations. The identified contamination and appropriate cleanup goals are summarized below.

3.1 Impacted Surficial and Subsurface Soils

Currently accessible surface soils located in the vicinity of the northern side of the former Site building in Area of Concern (AOC) 2 were determined to have been impacted due to historic Site operations conducted in this area. A surficial soil sample collected from 0 to 2 feet bgs, B107 (refer to Figure 2), collected from this location and submitted for off-site laboratory analysis, was determined to contain concentrations of arsenic exceeding MEDEP RAGs for "Outdoor Commercial Worker" and "Excavation/Construction Worker" exposure scenarios. In addition, several polycyclic aromatic hydrocarbon (PAH) compounds were detected in the surficial soil sample collected from B107. The concentration of benzo(a)pyrene detected in the surficial soil sample collected from B107 (estimated 2.66 mg/kg) exceeds its corresponding MEDEP Petroleum Remediation Guidelines for both the "Outdoor Commercial Worker" and "Excavation/Construction Worker" exposure scenarios. The concentration of benzo(b)fluoranthene detected in this sample exceeds the corresponding MEDEP "Outdoor Commercial Worker" guideline.

Based on field screening with a photoionization detector (PID), it is estimated that contamination identified in the area of B107 extends to a depth of approximately 6 to 8 feet bgs and is limited in lateral extent, as shown on Figure 2.

The particular proposed future use of the Site is not fully defined at this time; however, future development will most likely utilize the Site as commercial (retail and/or office) space. As such, the cleanup goal for the Site is to eliminate or reduce the risk of human contact to 1) the contaminated surface soils located in the vicinity of the northern side of the former Site building that are impacted by arsenic, benzo(a)pyrene, and benzo(b)fluoranthene and 2) the subsurface soils impacted with residual petroleum constituents . Soil removal or installation of a barrier over the contaminated soils, such as an engineered cover system, could potentially eliminate human exposure through direct contact, ingestion, or inhalation. The Site is currently supplied with public water, and a deed restriction prohibiting future groundwater extraction will be established for the Site. Depending on the selected remedial alternative, the deed restriction will also require proper maintenance of any cover system and prohibit excavation activities at the Site to protect future excavation/construction workers, without prior notification and approval of the MEDEP.

3.2 Impacted Soil Vapor

A soil vapor sample collected within the area of the former gasoline dispensers (SV101, refer to Figure 2) indicated residual petroleum contamination exceeding the MEDEP Commercial Soil Gas Target. Based on these results, it was recommended that a vapor barrier and/or passive sub-slab depressurization system be incorporated into the design of any new proposed Site structures to mitigate impacts to indoor air quality from potential vapor intrusion of volatile petroleum-related compounds. Vapor mitigation systems are similar to and/or analogous to radon mitigation systems and are relatively easy to install and incorporate into the design of new building foundations.

3.3 Impacted Groundwater

Residual groundwater contamination remains in the area of the former gasoline dispensers located in the southern portion of the Site. Elevated concentrations of benzene, ethylbenzene, and napthalene were identified in a groundwater sample collected from monitoring well MW101 (refer to Figure 2) that exceed their respective MECDC MEGs for drinking water and/or the MEDEP's State-wide Groundwater and Drinking Water Petroleum Remediation Guidelines. Municipal water is available to the Site; therefore, ingestion of contaminated groundwater is not anticipated to represent an exposure route for these contaminants. Due to the shallow groundwater table at the Site, the contaminated groundwater also has the potential to represent a direct contact risk to future construction workers. However, considering the brief timeframe for which workers would be exposed, and the relatively volatile nature of the petroleum contaminants, the contaminated groundwater is not expected to represent a significant or chronic health risk for future construction workers. Therefore, no additional cleanup activities to further mitigate impacted groundwater are proposed or recommended at this time. It is recommended that a deed restriction be imposed on the property restricting the extraction of groundwater, without prior notification and approval of the MEDEP.

4.0 DESCRIPTION OF EVALUATION CRITERIA

The comparison of the remediation alternatives was conducted using the evaluation and threshold criteria discussed below.

4.1 Overall Protection of Human Health and the Environment

Alternatives must pass this threshold criterion to be considered for implementation as the recommended alternative. The goal of this criterion is to determine whether a remediation alternative provides adequate protection of human health and the environment. It also addresses how identified risks are eliminated, reduced, or controlled. Protection of human health is assessed by evaluating how site risks from each exposure route are eliminated, reduced, or controlled through the specific alternative.

4.2 Technical Practicality

The focus of this evaluation criterion is to determine technical practicality of instituting the specific alternative. This criterion evaluates the likelihood that the alternative will meet project specifications.

4.3 Ability to Implement

This criterion analyzes technical feasibility and the availability of services and materials. Technical feasibility assesses the ability to implement and monitor the effectiveness of the alternative. Availability of services and materials evaluates the need for off-site treatment, storage or disposal services and the availability of such services. Necessary equipment, specialists and additional resources are also evaluated.

4.4 Reduction of Toxicity, Mobility, and Volume

This criterion evaluates the ability of the remediation alternative to significantly achieve reduction of the toxicity, mobility, and volume of the hazardous substances present at the Site. This analysis evaluates the quantity of hazardous substances and/or petroleum-impacted media to be removed, the degree of expected reduction in toxicity, the type and quantity of residuals to be reduced, and the manner in which the principle threat is addressed through the remediation alternative.

4.5 Short Term Effectiveness

This criterion addresses the period of time needed to complete the remediation, potential adverse impacts on human health and the environment that may exist until the clean up goals are achieved, and the time frame for accomplishing the associated reduction in the identified environmental conditions.

4.6 Preliminary Cost

The preliminary cost criterion for the remediation alternatives evaluates the estimated capital, operation, and maintenance costs of each alternative. Capital costs include direct capital costs, such as materials and equipment, and indirect capital costs, such as engineering, sampling contingencies, and licenses. Costs were developed as a balancing criterion for the remedial alternatives and should not be construed as bid costs or engineer's cost estimates. Cost may be used as a distinguishing factor in the selection of the remedial action. The preliminary costs developed should in no way be construed as a cost proposal, but rather a guide for selecting a remedial action.

5.0 EVALUATION OF REMEDIATION ALTERNATIVES

Based on the evaluation criteria outlined in the previous section and the potential exposure pathways identified for the Site, the remedial actions selected for the Site should accomplish the following objectives:

1. Minimize the potential for direct contact, incidental ingestion, or inhalation of contaminated surficial and subsurface soils located in the vicinity of the northern side of the former Site building;

2. Minimize the potential for inhalation of petroleum-impacted soil vapor detected on the Site within AOC 1 and AOC 2; and

3. Minimize the potential for direct contact or ingestion of petroleum-impacted groundwater identified on the Site within AOC 1.

To achieve these objectives, three remedial options were considered and are discussed in the following subsections.

5.1 Considered Remediation Alternatives

Three remedial alternatives were considered for the Site, including the "No Action" alternative, the "Soil Removal" alternative, and the "Limited Soil Removal and Soil Cover" alternative. These alternatives were evaluated using the criteria described in Section 4.0 and are summarized below. The attached Table 1 includes a Summary of the Evaluation and Comparison of the Remedial Alternatives.

In addition to the soil remediation activities associated with the "Soil Removal" and "Limited Soil Removal and Soil Cover" alternatives discussed below, the following additional remedial activities are proposed at the Site in conjunction with the selected alternative to address the impacted groundwater and soil vapor:

1. A deed restriction will be established for the Site notifying future Site owners and occupants of the existence and location of residual soil contamination; prohibiting the extraction of groundwater at the Site; and prohibiting excavation activities at the Site, without prior MEDEP notification and approval; and

2. Installation of a vapor mitigation system is recommended to be incorporated into the design of any new proposed Site structures to mitigate impacts to indoor air quality from potential vapor intrusion of volatile petroleum-related compounds identified in soil vapor samples collected at the Site.

5.2 No Action Alternative

A "No Action" alternative signifies that no further remediation activities would be conducted at the Site. The "No Action" alternative does not include a means for mitigating exposure to identified adverse environmental conditions or unacceptable risks remaining from contaminated soils; therefore, the potential for human exposure through direct contact, ingestion, and/or inhalation continues to exist for current trespassers and potential future Site occupants, workers, or trespassers.

The "No Action" alternative is not protective of human health and the environment and does not meet the threshold criteria. The "No Action" alternative would not achieve reduction of the toxicity, mobility, and volume of the hazardous substances present at the Site.

In addition, the "No Action" alternative would not be an effective remediation alternative, and potential impacts to human health would remain at the Site. The "No Action" alternative was not selected for implementation or further consideration because the contaminated soils, groundwater, and soil vapor would continue to pose a health risk to existing trespassers and future Site occupants, workers, and trespassers.

If the "No Action" alternative was selected for the Site, access to the Site would need to be restricted in order to prevent human contact with the impacted soils. Site access could be restricted by security measures or institutional controls, including fencing or a deed restriction. A deed restriction would be required prohibiting the excavation of contaminated soils at the Site and the extraction of groundwater from the Site. Maintenance of Site access restrictions and the associated costs of the necessary security would be indefinite.

5.3 Soil Removal Alternative

The second remediation alternative evaluated in this ABCA is the "Soil Removal" alternative. This alternative involves mitigating the potential for human exposure through the excavation and off-site disposal of impacted soils. Based on the results of the Phase II ESA, unacceptable risks of harm were identified due to exposures to arsenic, benzo(a)pyrene, benzo(b)fluoranthene, and/or other petroleum constituents in surface soils and subsurface soils in the vicinity of the northern side of the former Site building, as depicted on Figure 2.

As part of this alternative, contaminated soils identified north of the former Site building would be excavated and disposed of off-site. The estimated area of soil contamination that would be excavated as part of this alternative is shown on Figure 2. Soils with concentrations of arsenic, benzo(a)pyrene, benzo(b)fluoranthene, and other petroleum constituents, exceeding their corresponding cleanup goals, would be excavated to a depth (estimated to be approximately 8 feet bgs), where contaminant concentrations are reduced to below the corresponding Outdoor Construction Worker and/or Excavation/Construction Worker RAGs. Based on the area shown on Figure 2 and an estimated excavation depth of 8 feet, it is anticipated that approximately 250 cubic yards of material would be removed for this alternative. Once excavation activities are completed, these areas would be backfilled with clean fill and topsoil materials, based on the redevelopment scenarios for the specific areas.

Additional remedial activities are proposed to be conducted at the Site in conjunction with this "Soil Removal" alternative. A deed restriction will be established prohibiting the extraction of groundwater at the Site. Installation of a vapor mitigation system is also recommended in the event of new building construction.

The evaluation of the "Soil Removal" alternative is discussed below.

5.3.1 Overall Protection of Human Health and the Environment

This "Soil Removal" alternative provides adequate protection of human health and the environment through eliminating the risk of human exposure to the impacted soils identified at the Site through excavation and off-site disposal of impacted soils. Implementation of institutional controls including a deed restriction and declaration of environmental covenant to

prohibit groundwater extraction and excavation without the knowledge and approval of the MEDEP will reduce the risk of exposure to impacted groundwater. Installation of a vapor mitigation system in conjunction with the construction of any future building will minimize the risk of exposure to impacted soil vapor (through vapor intrusion into any future building) to future inhabitants of the Site.

5.3.2 Technical Practicality

Completing the remedial actions for the "Soil Removal" alternative is technically practical. The removal of soil could be completed utilizing accepted construction techniques. Both contractors and disposal facilities with experience with similar projects are readily available in the region. The goal of reducing or eliminating the risk of human exposure to impacted soils could be achieved through the removal and off-site disposal of the impacted soils.

5.3.3 Ability to Implement

Removal and off-site disposal of the accessible impacted soils at the Site is technically feasible and is an effective action for reducing or eliminating the risk of human exposure. Services and materials necessary to conduct this "Soil Removal" alternative are readily available.

5.3.4 Reduction of Toxicity, Mobility and Volume

This remediation alternative can significantly achieve reduction of the toxicity, mobility, and volume of the impacted soils at the Site. Removal of the contaminated soils would eliminate the risk of direct contact by existing trespassers and potential future site occupants, workers, and trespassers.

5.3.5 Short Term Effectiveness

The remedial action objective could be attained when the accessible impacted soils are removed from the Site. Potential adverse impacts to human health from exposure to the accessible contaminated soils may exist until the clean up goals are achieved.

5.3.6 Preliminary Cost

The estimated costs associated with this "Soil Removal" alternative are outlined in the attached Table 2 - Summary of Estimated Remediation Costs. Capital costs include direct capital costs, such as materials and equipment, and indirect capital costs, such as engineering and sampling contingencies. For the purposes of this evaluation, Ransom assumed that soils located in the vicinity of the north side of the former Site building with contaminant concentrations exceeding the Outdoor Commercial Worker and Excavation/Construction Worker RAGs would be excavated to a depth, where contaminant concentrations are reduced to below corresponding cleanup goals (estimated to be approximately 8 feet bgs).

Confirmatory sampling, soil characterization sampling, and off-site disposal were considered in the cost estimation. Following removal of the impacted soils, excavated areas would be backfilled with clean fill and topsoil.

Given the amount of soil that would be removed and disposed off-site as part of this alternative and the associated confirmatory sampling and waste disposal characterization necessary, the implementation of this alternative is cost-prohibitive. Because of this, the "Soil Removal" alternative was not selected for implementation at the Site.

5.4 Limited Soil Removal and Soil Cover Alternative

The third remediation alternative evaluated in this ABCA is the "Limited Soil Removal and Soil Cover" alternative. This alternative involves mitigating the potential for human exposure through removal of impacted soil to a depth of two feet from the vicinity north of the former Site building with subsequent installation of a soil cover system. Due to the dramatically elevated concentration of arsenic, it is recommended that surficial soils be removed from the Site, rather than simply covered to further mitigate potential exposure. In addition, removal of highly contaminated soil will facilitate any future development at the Site by reducing the total volume of contaminated soil and will present a less visible change to the general grading of the Site. Ongoing monitoring and maintenance, as needed, of the cover system would be required as part of this alternative.

The estimated area of soil contamination that would be covered as part of this alternative is shown in Figure 2. The area within the estimated lateral extent of contamination represents the location of soils with concentrations of arsenic, benzo(a)pyrene, benzo(b)fluoranthene, and/or other petroleum constituents exceeding the corresponding Outdoor Commercial Worker and Excavation/Construction Worker RAGs. Based on a proposed excavation depth of 2 feet, an estimated 50 cubic yards of soil would be removed for this alternative.

A soil cover can be in the form of a graveled or grass/landscaped area (with a geotextile fabric marker layer and a minimum of 12 inches of clean compacted soil), a paved parking lot or driveway area, concrete (such as a building floor or walkway/sidewalk), or a rip rap cover. Figure 3 presents a conceptual schematic of the various types of potential cover systems that could be installed at the Site. For this alternative, a cover system consisting of a geotextile marker layer overlain with two feet of clean compacted soil to be landscaped and seeded is recommended.

Additional remedial activities are proposed to be conducted at the Site in conjunction with this "Limited Soil Removal and Soil Cover" alternative. A deed restriction will be established for the Site notifying future Site owners and occupants of the existence and location of residual soil contamination; prohibiting the extraction of groundwater at the Site; and prohibiting excavation activities within impacted soil areas, without prior MEDEP notification and approval. Installation of a vapor mitigation system is also recommended in the event of new building construction.

This "Limited Soil Removal and Soil Cover" alternative fulfills the evaluation criteria, as discussed below.

5.4.1 Overall Protection of Human Health and the Environment

This "Limited Soil Removal and Soil Cover" alternative provides adequate protection of human health and the environment through eliminating the risk of human exposure to the accessible impacted soils identified in the vicinity of the north side of the former Site building. The risk of human exposure to the identified accessible contaminated soil would be reduced or eliminated by completing the remedial activities outlined in this alternative, including the limited removal of impacted surficial soils and the installation of a cover system over the remaining impacted soils.

5.4.2 Technical Practicality

Completing the remedial actions specified within this "Limited Soil Removal and Soil Cover" alternative is technically practical.

5.4.3 Ability to Implement

Removing contaminated soil to a depth of two feet and covering the remaining contaminated soils within the vicinity north of the Site building is technically feasible, and is an effective action for reducing or eliminating the risk of direct contact to the impacted soils. The necessary services and materials to complete the remedial tasks are readily available, including the necessary equipment and contractors.

5.4.4 Reduction of Toxicity, Mobility, and Volume

This remediation alternative can achieve a reduction of the mobility and volume of the contaminants in soils present at the Site. No reduction in the toxicity of contaminants remaining in subsurface soils would occur through this alternative. The volume of the contaminated soils at the Site would be reduced by approximately 25 percent after completing this remediation alternative. However, the potential risk of human contact to the impacted soils by existing trespassers or future site occupants, workers, and trespassers would be greatly reduced or eliminated.

5.4.5 Short Term Effectiveness

The remedial action objective would be achieved when the potential for human exposure to the accessible contaminated soils is reduced or eliminated following the removal of the top two feet of contaminated soil from the vicinity north of the former Site building, and the subsequent installation of a cover system over the remaining impacted soils in this location. Potential adverse impacts to human health from exposure to the accessible impacted soils at the Site may exist until the clean up goals are achieved.

5.4.6 Preliminary Cost

The estimated costs associated with this "Limited Soil Removal and Soil Cover" alternative are outlined in the attached Table 2 - Summary of Estimated Remediation Costs. Capital costs include direct capital costs, such as materials and equipment, and indirect capital costs, such as engineering and sampling contingencies.

For the purposes of this evaluation, Ransom assumed that soils located in the vicinity of the north side of the former Site building with contaminant concentrations exceeding their corresponding Outdoor Commercial Worker and/or Excavation/Construction Worker RAGs would be excavated to a depth of 2 feet bgs, and a cover system (geotextile marker layer overlain with two feet of clean compacted soil) would subsequently be installed over the remaining impacted soils in this location. The costs associated with this alternative are not prohibitive.

5.5 Selection of Proposed Remediation Alternative

Based on the results of the initial screening of each alternative as shown on Table 1 and discussed above, the "Limited Soil Removal and Soil Cover" alternative has been selected as the preferred remediation alternative. This alternative is proven to protect human health and the environment and is effective, technically feasible, and practical. As part of this alternative, a deed restriction will be established for the Site to:

1. Notify future Site owners and occupants of the existence and location of residual soil contamination at the Site;

2. Prohibit the extraction of groundwater;

3. Prohibit excavation activities within the cover systems, without prior MEDEP notification and approval; and

4. Require long-term maintenance of the cover systems.

In addition, installation of a vapor mitigation system in any future building constructed at the Site is recommended to reduce the potential for exposure to impacted soil vapor through vapor intrusion.

6.0 CONCEPTUAL REMEDIAL ACTION PLAN

The "Limited Soil Removal and Soil Cover" alternative protects human health and the environment and is effective, technically feasible, and practical. Because the "Limited Soil Removal and Soil Cover" alternative meets the evaluation criteria and is not cost-prohibitive, this alternative has been selected for implementation at the Site.

Based on the general intended future use of the Site as commercial space, the final cleanup goal for the Site is to eliminate the risk of human exposure to the surface soils located in the vicinity of the north side of the former Site building in AOC 2 that are contaminated with arsenic, benzo(a)pyrene, benzo(b)fluoranthene, and/or other petroleum constituents at concentrations exceeding the corresponding Outdoor Commercial Worker and Excavation/Construction Worker RAGs. The estimated area of soil contamination that would be remediated as part of this alternative is depicted on the attached Figure 2.

Soil removal will be conducted by a qualified contractor according to local, state, and federal regulations. Contaminated soil will be characterized by means of a toxicity characteristic leaching procedure to determine classification as Special or Hazardous waste, and will be transported from the Site to an approved facility under a bill of lading.

A cover system will be installed over the remaining impacted soils in this location. The proposed soil cover system will consist of a geotextile warning layer overlain with two feet of clean compacted material (1.5 feet of common borrow and 0.5 feet of loam) to be landscaped and seeded.

There are several effective cover systems that could potentially be incorporated into future Site redevelopment plans. Possible cover systems are discussed below. Figure 3 presents a conceptual schematic of the various types of potential cover systems that may be used to accommodate future Site redevelopment plan.

- Gravel or Loam Cover Systems: gravel or loam cover systems may be incorporated into proposed landscaping plans. Areas utilizing a loam or gravel cover will be underlain with a marker layer indicating the extent of clean materials. A minimum of 6 inches of clean, compacted fill will be placed in these areas over a geotextile fabric marker layer. The clean, compacted fill will be topped with a minimum of 6 inches of loam that will be seeded or planted according to the redevelopment landscape plans. The gravel or loam cover system thickness will total a minimum of 12 inches.

- Asphalt Pavement Parking and Driveway Areas: Paved parking and driveway areas that may be constructed as part of the redevelopment of the Site will act as covers over contaminated soil in these areas. Parking area cover systems will include a minimum of 6 inches of clean compacted structural soils (gravel sub-base materials) necessary for the structural integrity of the parking and driveway areas. The pavement will be placed in two layers, including a minimum of 2 inches of a pavement binder layer and a minimum of 1 inch of a finish pavement layer.

- Building Foundations: Constructed building foundations, generally in the form of an eight-inch or greater concrete slab, may act as a cover over any impacted soils remaining on-site located underneath the building foundations.

6.1 Maintenance Plan

As part of the deed restriction to be filed following the construction of the soil cover system, a maintenance plan will be prepared for the long-term maintenance of any cover system installed at the Site. The maintenance plan will establish routine inspection procedures and requirements for the repair and/or reconstruction of the cover systems, as necessary, to maintain the physical barriers and mitigate contact with impacted soils and concrete surfaces remaining at the Site.

6.2 Deed Restriction

A deed restriction will be established for the Site which will:

1. Notify future Site owners and occupants of the existence and location of residual soil contamination at the Site;

2. Prohibit the extraction of groundwater;

3. Prohibit excavation activities within the cover systems without prior MEDEP notification and approval; and

4. Require long-term maintenance of the cover systems.

6.3 Confirmatory Sampling

Confirmatory sampling and analysis will be conducted in conjunction with Site remediation activities in order to ensure that the cover system will be installed to the lateral extent necessary to adequately prevent human exposure to the identified COCs.

A minimum of six surface soil samples will be collected from representative locations along the edges of the cover system and submitted for laboratory analysis of the previously identified COCs (arsenic benzo(a)pyrene, and benzo(b)fluoranthene). A minimum of one duplicate sample will be collected for each analysis.

The laboratory will provide Level II analytical data using standard laboratory quality assurance/quality control (QA/QC) in accordance with United States Environmental Protection Agency (U.S. EPA) protocols and U.S. EPA laboratory data validation guidance included in Ransom's Generic Quality Assurance Project Plan (QAPP) for Brownfield Sites in Maine. The laboratory will provide the following information in the analytical report:

1. Data results sheets;

2. Method blank results;

3. Surrogate recoveries and acceptance limits;

4. Duplicate results/acceptance limits;

5. Spike/duplicate results/acceptance limits;

6. Laboratory control sample results;

7. Description of analytical methods and results; and

8. Other pertinent results/limits as deemed appropriate.

Analytical methods and laboratory standard operating procedures (SOPs) for each analysis are listed below:

1. Arsenic: USEPA Method 6010B, Analytics SOP QA-6010; and :

2. Benzo(a)pyrene and benzo(b)fluoranthene: U.S. EPA Method 8270C, Analytics SOPs QA-S005 and QA-S008).

At the completion of the confirmatory sampling tasks and receipt of the analytical results, a data usability analysis will be conducted by Ransom to document the precision, bias, accuracy, representativeness, comparability, and completeness of the results. The confirmatory sampling locations and analytical results will be provided in the closure report for the Site.

6.4 Contingency Plan

In the event the confirmatory soil sampling identifies higher concentrations of COCs and/or a wider distribution of contamination than expected, three options have been considered for a contingency plan and are dependent on the contaminants/concentrations detected. The first option involves extending the cover system to cover the sampling location(s) where the elevated contaminant concentration was detected; the second option involves conducting a post-remediation risk assessment to determine whether the remediation activities have provided adequate protection of human health for future Site occupants, workers, and trespassers; and the third option involves limited soil excavation and off-site disposal (and subsequent additional confirmatory sampling). A contingency plan will be finalized, if necessary, based on the results of the confirmatory soil sampling conducted during remediation activities and will be provided to the MEDEP and the U.S. EPA for review and approval prior to implementation.

6.5 Schedule

The owners of the Site will likely conduct the proposed/selected remediation/cleanup activities as part of the proposed future redevelopment of Site. As such, a formal timetable for completing the remediation activities has not yet been established, but redevelopment activities are anticipated for some time between 2013 and 2014.

7.0 SITE CLOSURE AND REPORTING

As part of the proposed cleanup activities, the Site will likely be entered into the MEDEP VRAP for review of environmental conditions and proposed remedial actions. Upon agreement with the proposed work by the MEDEP, the MEDEP will issue a VRAP No Action Assurance (NAA) letter.

An approved final written completion report summarizing the field activities conducted as part of the remediation of the Site will be submitted to the MEDEP. The final report will include a description of the remedial actions and field methods implemented at the Site and analytical data from confirmatory field screening and laboratory analyses. Upon submittal and approval of the completion documentation, the MEDEP VRAP will issue a Certificate of Completion.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Previous environmental investigations conducted at the Site identified residual contamination associated with historic Site operations, including contaminated soils in the vicinity of the north side of the former Site building and impacted groundwater and soil vapor. Three remediation alternatives were evaluated, including a "No Action" alternative, a "Soil Removal" alternative, and a "Limited Soil Removal and Soil Cover" alternative.

The "No Action" alternative is unacceptable because it does not meet threshold criteria of the overall protection of human health and the environment. The "Soil Removal" alternative was not selected, since this alternative is cost-prohibitive. The "Limited Soil Removal and Soil Cover" alternative protects human health and the environment and is effective, technically feasible, and practical. Because the "Limited Soil Removal and Soil Consolidation and Cover" alternative meets the evaluation criteria, and is not cost-prohibitive, this is the recommended remedial alternative. In addition, a deed restriction will be established for the Site, which will provide specific notification and Site management requirements.

Ransom recommends that the Site be entered into the MEDEP VRAP, and this analysis be submitted to the MEDEP VRAP for review and approval (i.e., to obtain a VRAP NAA letter). Upon acceptance, the remedial actions will be documented and the results of the actions presented in a completion report submitted to the MEDEP VRAP to obtain a final VRAP Certificate of Completion.

9.0 SIGNATURE(S) OF ENVIRONMENTAL PROFESSIONAL(S)

The following Ransom personnel possess the sufficient training and experience necessary to conduct an Analysis of Brownfields Cleanup Alternatives, and from the information generated by such activities, have the ability to develop opinions and conclusions regarding remediation alternatives and a Conceptual Remedial Action Plan, as presented herein, for the Site.

Environmental Professionals:

Kevin J. Trainor, E.I.
Project Engineer

Kristin D. Gill, E.I.
Project Engineer

Peter J. Sherr
2013.04.26 09:26:15 -04'00'

Peter J. Sherr, P.E.
Senior Project Manager

TABLE 1 – SUMMARY OF THE EVALUATION AND COMPARISON OF REMEDIAL ALTERNATIVES
29 Belmont Avenue (Former Exxon Station)
Belfast, Maine

Remedial Action Alternative (RAA)	Overall Protection of Human Health and the Environment	Technical Practicality	Ability to Implement	Reduction of Toxicity, Mobility and Volume	Short Term Effectiveness	Estimated Cost	Comments
1) No Action	• Long-term risks to human health by direct contact, inhalation, and ingestion will remain. • Potential long-term risks to the environment by stormwater runoff and/or leaching to groundwater may continue. • Cleanup levels will not be met.	• Not applicable.	• Not applicable – other than natural attenuation, no response action will be implemented.	• No reduction in toxicity, mobility or volume of the contaminated media.	• Not applicable – other than natural attenuation, no response action will be implemented. Ineffective natural attenuation due to the types of identified contaminants.	• This alternative will involve ongoing security measures and maintenance and will cost approximately $1,000 per year.	• This alternative does not address the recognized environmental conditions and contamination stigma at the property. • Because contaminated soil will remain onsite, this alternative will require a deed restriction to limit future site use and require proper management of contaminated soil remaining at the site.
2) Soil Removal and Off-Site Disposal	• Risks to human health by direct contact, inhalation and ingestion of contaminated media is significantly reduced or eliminated by removing the contaminated soil from the site. • Potential risks to the environment by stormwater runoff or leaching to groundwater are significantly reduced by removing contaminated media form the site.	• Soil removal utilizes standard excavation and construction techniques for removal of the contaminated media, and therefore, is technically practical for the identified contamination.	• Removal of contaminated soil is a common and accepted form of remediation and has been proven effective in reducing and/or eliminating contamination.	• As soil is removed, the volume of contaminated soil is reduced; therefore, the toxicity and mobility of the contaminants is reduced.	• Removal of contaminated soil is an effective and proven method of remediation.	• Excavation and disposal of contaminated soil will cost approximately $55,200	• Reduces and/or eliminates potential risk of human contact with impacted soils. • Contaminated soils will be removed in their entirety, resulting in significant increase in cleanup costs • A deed restriction prohibiting the extraction of water will also be necessary.
3) Limited Soil Removal and Cover Systems	• Risks to human health by direct contact, inhalation and ingestion of contaminated media is significantly reduced or eliminated by limited removal and covering remaining contaminated soil in-place and placing deed restrictions on future site reuse. • Risks to the environment by stormwater runoff or groundwater leaching are reduced by installing an impervious barrier over the material, or placing clean fill and maintaining vegetation over the material. • The proposed alternative will not achieve background concentrations or reduce concentrations below MEDEP RAGs, but the physical barrier and institutional controls will protect human health and the environment from direct exposure.	• Soil removal and cover systems utilize standard construction techniques. Institutional controls are becoming a more common and viable alternative. Therefore, this remedial alternative is technically practical for the identified contamination.	• Targeted removal and covering of soil can be easily implemented; however, institutional controls may be difficult to maintain if the property ownership is transferred and future owners of the site are unwilling to abide by the restrictive covenant.	• Approximate reduction of 25% contaminated soil volume; no reduction of toxicity of the contaminated media.	• This alternative significantly reduces or eliminates human contact, inhalation, and ingestion risks if the soil cover system is not disturbed.	• This soil cover alternative will cost approximately $33,780.	• Because contaminated soil will remain onsite below the cover system materials, this alternative will require a deed restriction to limit the future use of the site and require the proper management of covered areas and contaminated soil remaining at the site. • A deed restriction prohibiting the extraction of water will also be necessary and a soil maintenance plan will be required. • Lower potential risk of long-term liabilities, since exposure to sensitive receptors will be reduced. • Best alternative based on the majority of parameters, including cost.

Table 2: Summary of Estimated Remediation Costs

Soil Removal Alternative	Number	Units	Unit Cost	Total
Disposal and Transportation				
Contaminated Soil [1]	250	CY	$100	$25,000
Disposal Soil Characterization Samples	2	Ea	$1,500	$3,000
Replacement Clean Fill [2]	250	CY	$25	$6,250
Engineering Oversight/Closure Report				
Oversight	40	Hrs	$75	$3,000
Confirmatory Samples (Arsenic, B(a)P & B(b)F)	10	Ea	$275	$2,750
Report	1	LS	$6,000	$6,000
Subtotal				*$46,000*
Contingency 20%				$9,200
TOTAL				**$55,200**

1 - Includes excavation to an estimated depth of 8 feet bgs, transport, and disposal; assumes 150 CY per day and that soils are disposed as special waste (i.e., non-hazardous waste).
2 - Includes material, backfill, and compaction.

Table 2: Summary of Estimated Remediation Costs

Limited Soil Removal and Soil Cover Alternative	Number	Units	Unit Cost	Total
Disposal and Transportation				
Contaminated Soil [1]	50	CY	$100	$5,000
Disposal Soil Characterization Samples	1	Ea	$1,500	$1,500
Replacement Clean Fill [2]	50	CY	$25	$1,250
Cover Construction [3]				
Excavator/Dozer & Operator	10	Hrs	$125	$1,250
Engineering Oversight/Closure Report				
Oversight	20	Hrs	$75	$1,500
Confirmatory Samples (Arsenic, B(a)P & B(b)F) [4]	6	Ea	$275	$1,650
Report	1	LS	$6,000	$6,000
Long-term Maintenance of Cover Systems [5]	20	Yr	$500	$10,000
Subtotal				*$28,150*
Contingency 20%				$5,630
TOTAL				**$33,780**

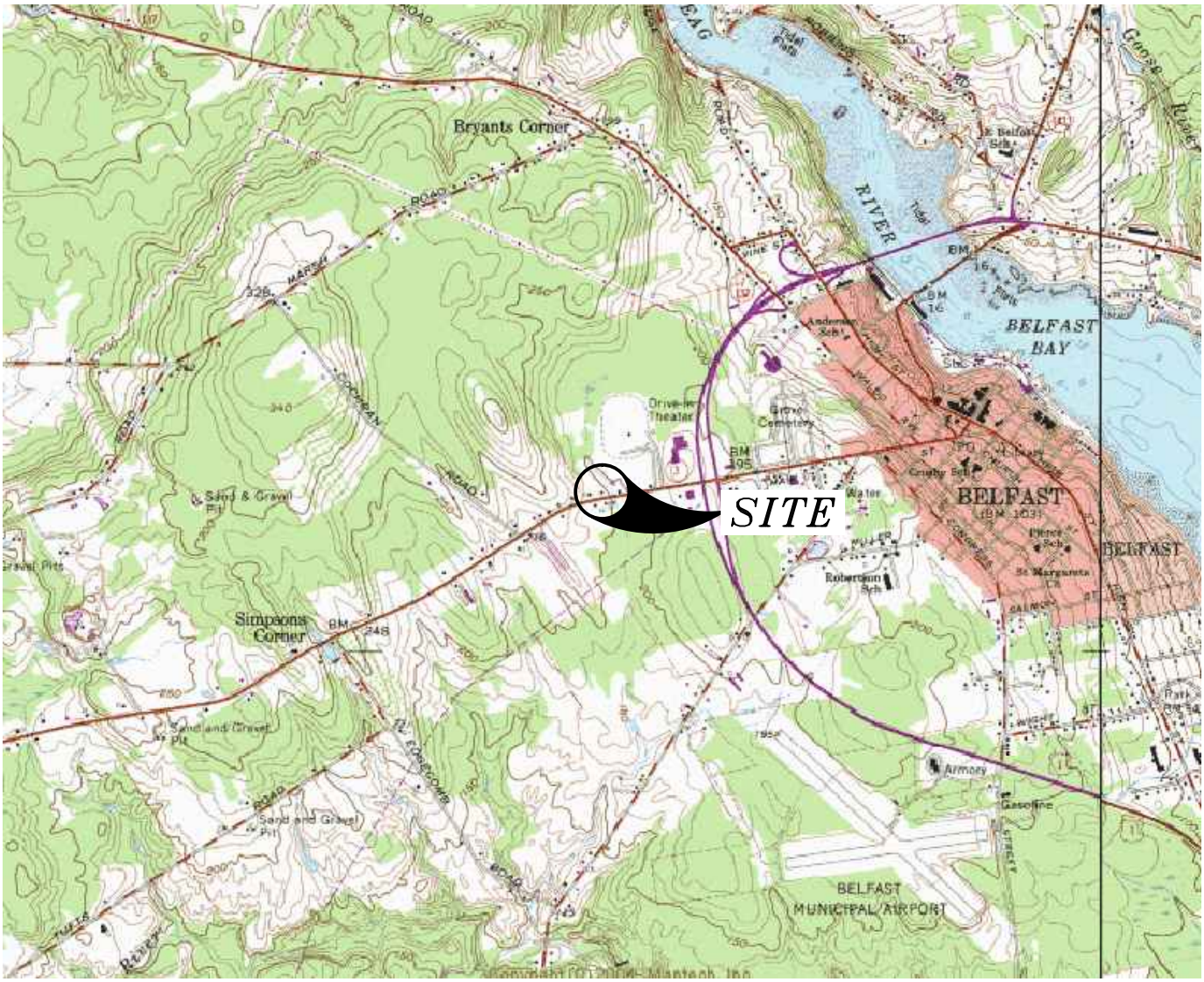
1 - Includes excavation to an estimated depth of 2 feet bgs, transport, and disposal; assumes 150 CY per day and that soils are disposed as special waste (i.e., non-hazardous waste).

2 - Includes material, backfill, and compaction.

3 - Includes geotextile fabric and two feet of material (fill and loam or rip rap), backfill, and compaction.

4 - Assumes 6 confirmatory samples will be collected from the perimeters of the area covered in-place.

5 - Assumes inspections of cover systems and repairs, as needed, will be conducted annually. Cost provided in table is for a period of 20 years.



TAKEN FROM U.S.G.S. 7.5x15 MINUTE SERIES TOPOGRAPHIC MAP OF BELFAST, MAINE–1960 (REVISED 1979).

CONTOUR INTERVAL IS 10 FEET

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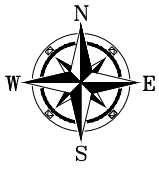
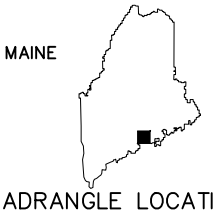
LONGITUDE 69°01'39"

UTM COORDINATES: 49:18:874mN
4:97:805mE





QUADRANGLE LOCATION

SCALE in FEET
1:24,000

RANSOM Consulting, Inc.

SITE LOCATION MAP

PREPARED FOR:	SITE:	
CITY OF BELFAST 131 CHURCH STREET BELFAST, MAINE	29 BELMONT AVENUE (FORMER EXXON STATION) BELFAST, MAINE	DATE: APRIL 2013 PROJECT: 111.06134 FIGURE: 1

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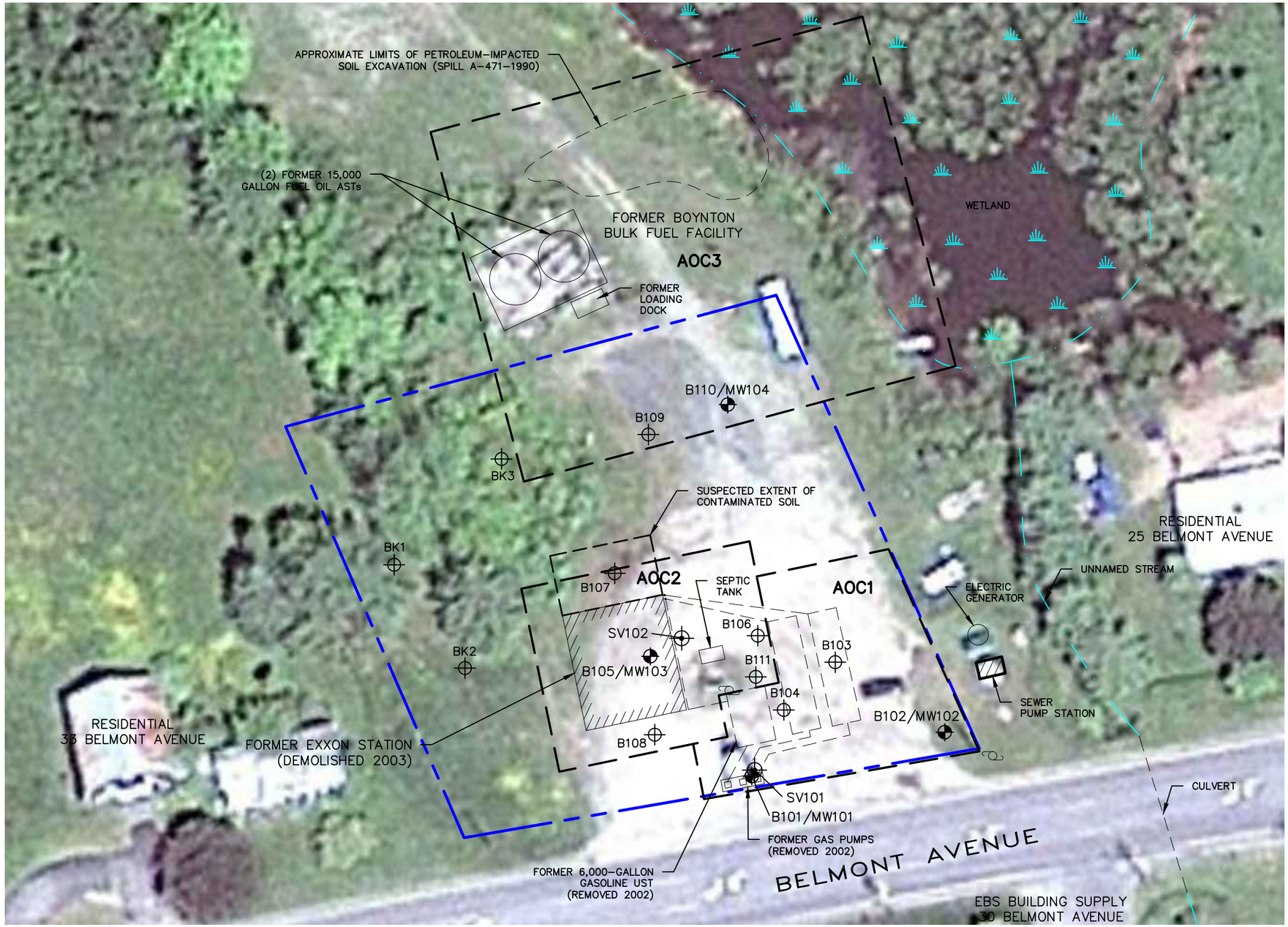


N

LEGEND:

- B109 — SOIL BORING
- SUSPECTED EXTENT OF CONTAMINATION
- UTILITY POLE
- SURFACE WATER FLOW DIRECTION
- AOC1 — APPROXIMATE LIMITS OF AREA OF CONCERN
- APPROXIMATE LIMITS OF 1990 SOIL EXCAVATION
- APPROXIMATE WETLAND AREA
- APPROXIMATE SITE BOUNDARY (BOUNDARY TAKEN FROM CITY OF BELFAST TAX MAP)

NOTES:

1. SITE PLAN BASED ON OBSERVATIONS MADE BY RANSOM CONSULTING, INC. AERIAL IMAGE PROVIDED BY GOOGLE EARTH.
2. SOME FEATURES ARE APPROXIMATE IN LOCATION AND SCALE.
3. THIS PLAN HAS BEEN PREPARED FOR THE CITY OF BELFAST. ALL OTHER USES ARE NOT AUTHORIZED, UNLESS WRITTEN PERMISSION IS OBTAINED FROM RANSOM CONSULTING, INC.

0 20 40 80

SCALE in FEET
1"=40'

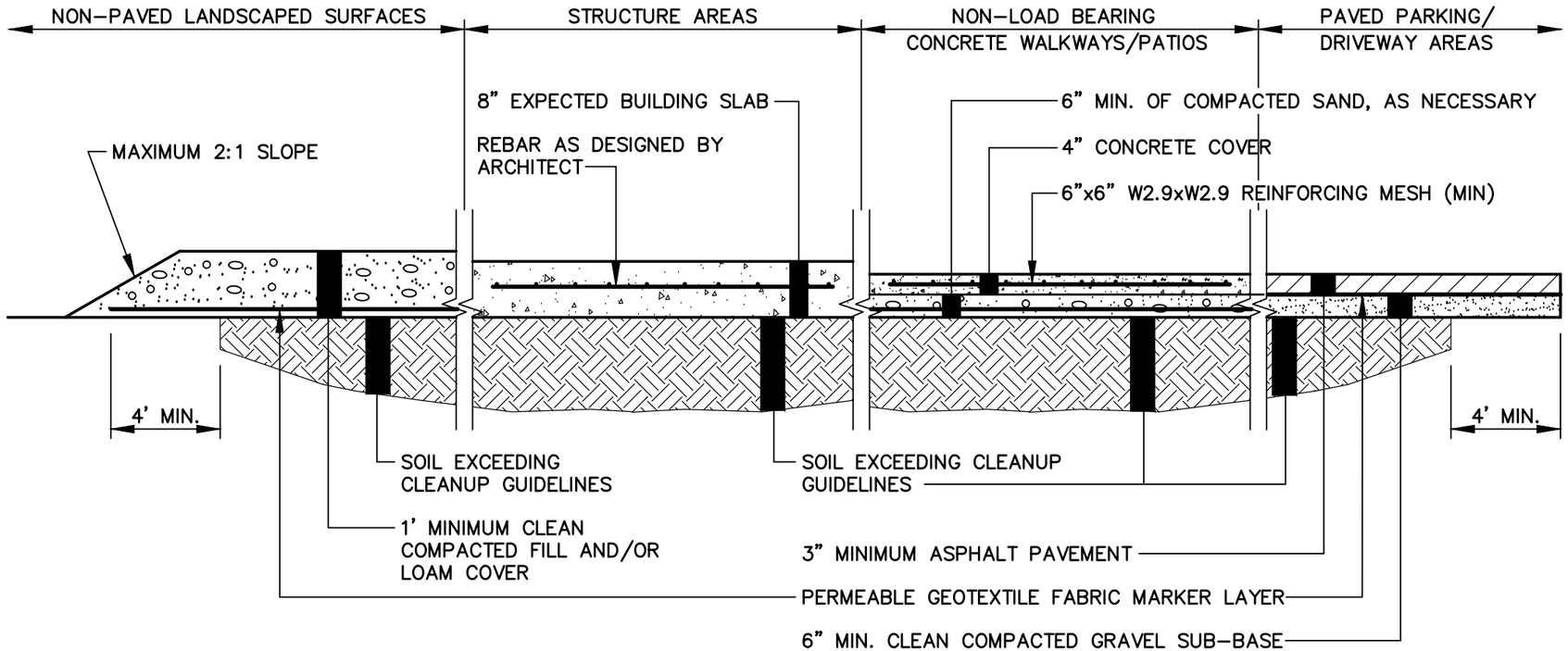
RANSOM Consulting, Inc.

PREPARED FOR:	SITE:
CITY OF BELFAST 131 CHURCH STREET BELFAST, MAINE	29 BELMONT AVENUE (FORMER EXXON STATION) BELFAST, MAINE

SITE PLAN

DATE: APRIL 2013
PROJECT: 111.06134
FIGURE: 2

\\meserver\projects\2011\111.06134\29 Belmont Ave. (Former Exxon)\Drawings\111.06134-006-ABCA.dwg Apr 05, 2013 - 2:27pm



NOTE

THE QUANTITIES IDENTIFIED ARE MINIMUM REQUIREMENTS FOR COVERING OF THE IDENTIFIED CONTAMINATED SOILS. ADDITIONAL SUB–BASE MATERIALS MAY BE REQUIRED IN AREAS PROPOSED FOR ASPHALT PAVING, BUILDINGS AND/OR CONCRETE SIDEWALKS/PATIOS, AS NECESSARY, TO MAINTAIN STRUCTURAL INTEGRITY OF THESE MATERIALS. THE SITE DESIGN ENGINEER IS REQUIRED TO MAKE THE DETERMINATION OF STRUCTURAL SUITABILITY.

RANSOM Consulting, Inc.

PREPARED FOR:
CITY OF BELFAST
131 CHURCH STREET
BELFAST, MAINE

SITE:
29 BELMONT AVE
(FORMER EXXON STATION)
BELFAST, MAINE

SOIL COVER SYSTEM
CONCEPTUAL SCHEMATIC

DATE: APRIL 2013
PROJECT: 111.06134
FIGURE: 3

P:\2011\111.06134\29 Belmont Ave. (Former Exxon)\Drawings\111.06134 COVER SYSTEMS.dwg FIGURE 3 Apr 05,2013– 3:52pm