

**REQUEST FOR PROPOSALS
BROWNFIELDS SITE CLEANUP SERVICES**

**CORNER OF NORTH MAIN STREET AND CONGRESS STREET
CITY OF ST. ALBANS, VT**

INTRODUCTION

Five parcels located at the corner of the intersection of North Main Street and Congress Street, including 109 and 119¹ North Main Street and 9, 13 and 15 Congress Street, have been impacted by soil and groundwater contamination from a leaky underground storage tank that was removed in August 1987. Soil and groundwater at the site is also impacted by dissolved phase acetone which may be associated with the release of paint thinner or varnish plasticizers used at 109 North Main Street in the early 1900's. The combined area of the five properties comprising the Site is approximately 0.78 acres and is further described in city records as tax parcels #11063109, #11063115, #11063117, #11063119 #11022009,e, #11022009,a, and #11022015. The property is filed in the Waste Management and Prevention Division records as the North Main and Congress Street property, SMS Site #2013-4356.

Ruggiano Engineering Inc., of St. Albans, VT completed a Phase I Environmental Site Assessment (ESA) in December 2012 and a Phase II ESA in April 2013. Copies of these reports are in the Site file and are available for review at St. Albans City Hall, 100 North Main Street or the Vermont Department of Environmental Conservation (VTDEC) offices in Montpelier, Vermont. Files are also available for download at www.stalbanstvt.com/rfps. The Phase II ESA included the advancement of seventeen soil borings and installation of fifteen shallow monitoring wells.

Gasoline contamination extends vertically through the unsaturated zone and in the area of fluctuating seasonal high water table, or the smear zone. A very dense glacial till layer was observed at approximately 8-10 feet in the southwest portion of the Site. The majority of dissolved-phase, vapor phase and adsorbed phase contamination appear to be limited to the soil horizon located above the dense glacial till layer. Approximately 27 pounds of dissolved phase and vapor phase petroleum hydrocarbon contaminant mass is estimated to be present at the Site.

Acetone was detected in groundwater at four on-site monitoring wells below the applicable Vermont Groundwater Enforcement Standards. The area impacted by dissolved phase acetone contamination is estimated to be approximately 15,000 square feet.

Ruggiano Engineering has developed a remediation plan to address soil and groundwater contamination at the Site that utilizes a combination of soil excavation and off-Site disposal, use of oxygen-enhanced bioremediation to address off-Site contamination within the North Main Street right-of-way, installation of a standby sub-slab depressurization system beneath

¹ Includes any parcels that might be referenced with addresses from 115 to 125 in E911 data or land records.

the proposed on-Site structure and continued groundwater and air quality monitoring to confirm that all contaminant issues have been addressed. Ruggiano Engineering believes that human health and the environment will be sufficiently protected and that redevelopment goals for the Site will be met in a cost effective and timely manner using this approach.

The City of St. Albans is requesting proposals from qualified contractors to perform Site remediation activities as described below:

SCOPE OF SERVICES

1. The Contractor is responsible for obtaining all permits including City of St. Albans Department of Public Works approval for work within the North Main Street right-of-way, DigSafe notification for any subsurface excavation for protection of existing utilities, Bill of Lading for transport of wastes;
2. The Contractor is responsible for providing flaggers, signage, safety fencing as described in the Remedial Strategy or other safety measures required by the City of St. Albans;
3. The Contractor will excavate, close and dispose two sub-slab hydraulic lifts located in the former Midas Muffler facility. Contractor will include the disposal of wastes contained in the hydraulic lifts;
4. Under the direction of the Engineer, excavate and segregate approximately 40 cubic yards of contaminated soil in the area of the former hydraulic lifts. Contractor will temporarily stockpile and polyencapsulate segregated soils. Contractor will haul soils to the licensed Casella Waste Facility in Coventry, VT for use as Alternative Daily Cover (ADC) after Engineer has confirmed appropriate waste disposal characterization. Contractor will backfill excavation with appropriate structural fill compacted in six inch lifts;
5. Under the direction of the Engineer, excavate and segregate approximately 5 cubic yards of concrete waste from areas of oil staining on the existing concrete slab located in the northeast corner of the former Midas Muffler auto repair facility at 119 North Main Street. Concrete stained portions of the slab will be broken into 6-inch minus pieces for appropriate disposal as ADC.
6. Under the direction of the Engineer, excavate and segregate approximately 400 cubic yards of contaminated soil in the southwest corner of 109 North Main Street, including areas contained within the US Route 7/North Main Street road right of way. Contractor will temporarily stockpile and polyencapsulate segregated soils on-site. Contractor will haul soils to the licensed Casella Waste Facility in Coventry, VT for use as Alternative Daily Cover (ADC) after Engineer has confirmed appropriate waste disposal characterization;
7. Contractor will backfill excavation with appropriate structural fill compacted in six inch lifts. During the placement of clean backfill material perform injection of Oxygen Release Compound (ORC) as outlined in the Remedial Strategy;
8. Following removal of contaminated soils Contractor will remove and dispose the basement foundation from 109 North Main Street as non-hazardous waste. All utilities entering the basement foundation at 109 North Main Street will be appropriately capped and abandoned. The basement cavity will be backfilled with appropriate structural fill, compacted in six inch lifts to the proposed redeveloped subgrade elevation; and
9. Contractor will install the sub-slab depressurization system as outlined in the remedial strategy and illustrated on Sheets SK-6 and SK-7.

REMEDIAL STRATEGY

Soil Excavation

The proposed remedial strategy will include the excavation, temporary stockpiling, transport and disposal of the area surrounding monitoring MW-2. Soils are expected to be suitable for use as Alternative Daily Cover (ADC) at a Vermont certified landfill. An area of approximately 40 feet (north to south) by 50 feet (east to west) is believed to be impacted by petroleum contamination in the vicinity of MW-2. Based on PID soil screening during advancement of soil borings, soils from approximately two feet to eight feet below ground surface (or a total thickness of approximately six feet) are expected to be contaminated and will be segregated for disposal as ADC. The excavation area will include areas on both the 109 North Main Street property and a small area within the North Main Street right-of-way. The excavation is expected to be limited to the west due to the presence of municipal utilities including sewer and water, therefore the full extent of contamination is not expected to be reached at the limits of the excavation. The actual excavation area is expected to extend approximately 20 feet north, south and east of monitoring well MW-2 and approximately 25 feet west of MW-2.

Soil screening with a PID will be completed during excavation to confirm the limits of contamination have been reached. An estimated six confirmatory soil samples will be collected by Ruggiano Engineering from the bottom and side walls of the excavation and submitted for laboratory analysis. Soil samples will also be collected by Ruggiano Engineering from the segregated stockpile and submitted for laboratory analysis to verify suitability for disposal as ADC. It is anticipated that two confirmatory samples will be collected from the segregated soils based on the likely tonnage to be removed and disposal requirements of one sample per 500 tons.

A new 2 inch diameter monitoring well will be installed by the contractor at the downgradient limits of the excavation cavity (approximately 20 feet west of MW-2) to confirm that residual soil and groundwater has been excavated. A five foot section of 0.010 slotted screen, solid riser to grade and expandable water tight cap will be provided by the contractor along with a bolted steel road box for protection.

The contractor will perform the closure of two remaining sub-slab hydraulic lifts at the former Midas Muffler facility at 119 North Main Street. Although groundwater sampling at monitoring wells located in close proximity to the hydraulic lifts did not indicate the presence of contamination, REI is anticipating the need to excavate, segregate and dispose a small volume of soils from this area. A conservative estimate of 40 cubic yards of soil is estimated to be removed from this area. Approximately 5 cubic yards of concrete waste will also be generated from within the existing structure and includes areas of oil staining on the existing concrete slab located in the northeast corner of the former Midas Muffler auto repair facility at

119 North Main Street. Concrete stained portions of the slab will be segregated and broken into 6-inch minus pieces for appropriate disposal as ADC. Contaminated soils and concrete generated as part of the hydraulic lift closure and concrete slab remediation will be temporarily stockpiled on site and polyencapsulated while waste characterization is completed. The contractor will be responsible for the loading and hauling of wastes to the licensed Casella Waste facility in Coventry, VT.

Excavations created as part of remedial activities will be backfilled with clean granular fill meeting Vermont Agency of Transportation specification 703.03A, Sand Borrow and Cushion, 703.04, Granular Borrow, or 704.08, Granular Backfill for Structures. Backfill will be compacted to 95 percent of maximum Modified Proctor density in 6 inch thick maximum depths.

ORC Injection

Oxygen Release Compound (ORC) is a proprietary formulation of phosphate-intercalated magnesium peroxide that, when hydrated, produces a controlled release of oxygen for periods of approximately one to two months. By increasing the supply of oxygen to the subsurface environment, the rate of naturally occurring aerobic contaminant biodegradation also increases. The injection of ORC at the westerly limits of the soil excavation would have remedial benefits in areas below North Main Street that cannot be disturbed. As oxygen enriched groundwater migrates from the ORC injection point to the west beneath the road and potentially along utility corridors in this area, improved bioremediation is anticipated. The objective of the ORC injection is to try to treat areas that cannot otherwise be accessed for soil excavation and disposal.

ORC is typically applied as a slurry or dry powder and is injected directly to the subsurface or applied within an open excavation. For this application, ORC will first be mixed as a slurry and then applied directly to the open excavation. Maximum treatment effect is obtained when ORC is mixed as thoroughly as possible within the backfill material. The more dispersed the ORC slurry within the excavation backfill, the more effective the treatment.

ORC powder is shipped in a pre-measured batch. Each batch is contained within a plastic bag which is shipped in a 5-gallon bucket. In order to achieve a slurry solids content of 50%, approximately 3.6 gallons of water should be added to each 30 pound bag of ORC. A 50% solids slurry is relatively thick and helps to keep the ORC dispersed through soils even when it contacts water in the bottom of the excavation during installation. An appropriate mixing device such as a 0.5 horsepower hand held drill with a stucco mixer should be used to thoroughly mix the ORC and water. A common paint paddle can be used to scrape the bottom and sides of the container to ensure thorough mixing. After mixing, small amounts of water can be added to adjust the consistency of the slurry. ORC slurry should be applied to soils as soon as possible after mixing. If the ORC slurry has been standing more than 15 minutes it should be remixed before using. ORC should not be allowed to let stand for more than 30 minutes without stirring otherwise the slurry will begin to harden into weak cement.

An excavator should be used to mix the slurry thoroughly in soils while backfilling. In each scoop of backfill material add the appropriate amount of ORC slurry materials in the backhoe bucket approximately 3 pounds of ORC per cubic yard of soil. After mixing, dump the slurry and backfill into the bottom of the excavation. The backhoe bucket can be used for further mixing in the excavation.

ORC Advanced pellets will also be applied in the saturated zone to sustain aerobic conditions for a period of 9 to 12 months and facilitate long-term aerobic bioremediation in groundwater. ORC Advanced pellets will be applied at a rate of approximately 1.2 pounds per cubic yard of backfill in the saturated zone from approximately 10 feet to 6 feet below ground surface.

Under the direction of the Engineer the contractor will purchase, ship, mix and inject the ORC in the southwest portion of the site and within the US Route 7 / North Main Street right of way.

SSD System Placement and Installation

Sub-Slab Depressurization (SSD) systems are a proven, effective and economical means for intercepting subsurface vapors that would otherwise infiltrate into a structure of concern. The presence of a basement or subsurface structure can provide a “sink” for migration of vapor phase contaminants. Under pressurization within a building relative to the ambient atmosphere can create a significant negative pressure differential between the building/basement air and the surrounding soil. Vapor phase contaminants can be advectively transported toward the structure as a result of the pressure differentials. The purpose of the SSD system is to create a negative pressure field directly under the building. VOC’s caught in the advective sweep of this negative pressure field are collected and piped to an ambient air discharge point. Acetone contamination in the vicinity of the proposed on-Site structure is likely below the applicable residential Soil Screening Value of 61,000 µg/Kg. Therefore, the SSD system is not intended to remediate the soil or groundwater beneath the proposed on-Site building; it’s design objective is to prevent soil gases from infiltrating the building. This is why the system is appropriately termed a depressurization system as opposed to a soil vapor extraction (SVE) system.

The SSD system will be comprised of six horizontal wells running the entire length of the proposed building and located approximately six inches below the bottom of the concrete slab. The horizontal wells will be spaced approximately eighteen feet apart beginning at five feet from the inside of the westerly wall. In this way, the likely radius of influence of approximately ten feet will effectively evacuate soil gases from below the entire building footprint. The proposed depressurization wells will be constructed using 4-inch diameter SDR-35 PVC materials with perforations. Solid 4-inch PVC materials will be used to manifold the six horizontal wells together and to extend the exhaust pipe to the roof of the structure. The perforated section of pipe will be wrapped in filter fabric to prevent entry of granular fill.

A centrifugal fan will only be installed to activate the SSD system if the results of soil gas testing indicate the presence of acetone or other VOCs above applicable Vapor Intrusion (VI) screening values. A sample port and ball valve will be installed on the vertical section of SSD system piping so that soil gas from below the building pad can be isolated and sampled. The

acetone VI screening value is 315 µg/m³. Based on the soil type observed during advancement of borings at the site, Ruggiano Engineering has selected a Plastec Model P20-4 1/3 HP corrosion proof centrifugal fan capable of extracting 800 cubic feet per minute of air at 0.5 inches of water column. A minimum pressure differential of two Pascals (Pa) is needed to effectively draw soil gases to the SSD system. One Pa equals 0.004 inches of water column, therefore a minimum suction of 0.008" WC is required at the furthest point in the SSD laterals. Ruggiano Engineering anticipates operating all SSD wells simultaneously. Appropriate switches, gauges and valves will be included as part of the installed system. Figure SK-6 in Appendix A provides a schematic of the proposed SSD system layout and the proposed construction details.

INSTRUCTIONS FOR REQUEST FOR PROPOSAL (RFP) RESPONSE

1. GENERAL

This Request for Proposals (RFP) invites qualified contractors to submit proposals for the specific work described in the Scope of Services section of this RFP.

2. PREPARATION OF RFP RESPONSE

The preparation of the RFP Response shall be at the expense of the prospective contractor. It is the sole responsibility of the prospective contractor to fully examine this RFP's addenda (if any) and referenced documents - Questions shall be addressed to Chip Sawyer, Director of Planning and Development, City of St. Albans, 100 North Main St. St. Albans, VT 05478 c.sawyer@stalbnavt.com until July 11, 2013 at 4PM. All such questions will be responded to by Chip Sawyer, in the form of written addenda to the RFP, these addenda will be faxed and/or emailed to parties that received the RFP.

3. RFP RESPONSE FORMAT AND CONTENTS

Proposals should be prepared simply, providing a straight forward description of the prospective consultant's ability to satisfy the requirement of the RFP. Emphasis should be on completeness and clarity of contents.

City of St. Albans assumes no responsibility and no liability for costs incurred relevant to the preparation and submission of the RFP by prospective consultants, or any other costs prior to issuance of a contract.

City of St. Albans may reject any RFP Response that does not meet these requirements. The prospective remediation contractor's RFP Response shall contain the following information under the indicated headings.

A. LETTER OF TRANSMITTAL

The prospective contractor's Response shall include a letter of

transmittal not to exceed one (1) page, signed by an individual(s) authorized to bind the prospective Contractor contractually. The transmittal letter shall include the name, title, address, and telephone number of one or more individuals who can respond to requests for additional information and also, of one or more individuals who are authorized to negotiate and execute a contract on the prospective contractor's behalf, if applicable.

B. RECENT PROJECTS AND REFERENCES

Provide a description of the history, experience and qualifications of individual/firm and any proposed subcontractors to perform the Scope of Services. Please provide:

- List of other similar projects undertaken;
- References from three similar projects undertaken.

Please make specific reference to experience and qualifications as related to performing remediation services in compact urban sites, and preferably at sites in the City of St. Albans.

C. CERTIFICATIONS

Provide proof of all necessary licenses and certifications to perform this work, appropriate OSHA HAZWOPER training and certification including the 40 hour Hazardous Waste Site Health and Safety Course which meets requirements of 29 CFR 1910.120(e) and a current 8 hour refresher training under 29 CFR 1910.120.

D. PRICE PROPOSAL

Please provide a detailed Budget which corresponds to each of the numbered items contained in the Scope of Services. The contractor is provided an allowance of \$3000 for purchase and shipping of the ORC compound and an allowance of \$500 for the sub-slab depressurization blower (if needed).

Contractor should provide add/deduct Unit Prices for the following:

- Contaminated soil excavation and clean backfilling on a per yard basis
- Soil disposal fee on a per ton basis
- Soil transport fee to Coventry, VT on a per truck load basis

PRICE ALTERNATE: Please provide a separate line item for removal and disposal of the complete concrete slab, frost wall and footings located at 119 North Main Street (including the former State Farm Insurance office and Midas Muffler facility). Other than the estimated five cubic yards of contaminated concrete material described in the Scope of Services, the remainder of the slab may be considered non-hazardous. Cores of the slab have shown its depth to be 6 inches.

4. BIDDING AND WORK SCHEDULES

June 26, 2013: RFP issued, Question period for bidders begins.

July 8, 2013: Non-mandatory pre-bid Q&A session and site walk at 9:00 AM. *Meet at City Hall, 100 North Main Street, St. Albans, VT.*

July 11, 2013: End of question period at 4PM.

July 12, 2013: Response to Questions issued.

July 15, 2013: Bids due at 4PM.

July 17, 2013: Award contract.

August 16, 2013: Completion of work.

5. SUBMISSION OF RFP RESPONSES

Please provide one (1) hard copy or one (1) pdf electronic version of your RFP response by Monday July 15, 2013 at 4PM. You can email the electronic version to c.sawyer@stalbansvt.com and the hard copy should be delivered to:

Chip Sawyer
Director of Planning and Development
City of St. Albans
100 North Main St.
St. Albans, VT 05478

Responses received later than the specified date and time will not be considered.