



TOWNSHIP OF WEST ORANGE

25 LAKESIDE AVENUE, WEST ORANGE, N.J. 07052

DEPARTMENT OF PUBLIC WORKS

ROBERT D. PARISI

Mayor

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LEONARD R. LEPORE

Director/Municipal Engineer

November 6, 2018

Mayor and Township Council
Municipal Building
66 Main Street
West Orange, NJ 07052

RE: SITE REMEDIATION
LEAKING UNDERGROUND STORAGE TANK AND PIPING
PUBLIC WORKS BUILDING
25 LAKESIDE AVENUE

Mayor Parisi, Council President McCartney and Council Members

West Orange continues to require the professional services of a Licensed Site Remediation Professional (LSRP) to remediate contaminated groundwater and soil at the Public Works Building at 25 Lakeside Avenue due to a leaking underground storage tank which has been removed. The LSRP of Record is Manal Baba formerly of T&M Associates of Middletown, New Jersey but now with the firm of CME Associates of Monmouth Junction, New Jersey. CME Associates responded to the Township's Request for Professional Qualifications for this calendar year while T&M Associates did not.

CME will perform additional Soil Sampling and Monitoring Well Gauging and Sampling of groundwater. The purpose of this work is to demonstrate that the contaminants are degrading naturally. This is known as Natural Attenuation which is a no action alternative based on natural processes to clean the groundwater. The additional soil samples will be analyzed for use of Compliance Averaging to demonstrate compliance with the NJDEP Technical Requirement for Site Remediation. The goal of this work is for the LSRP to issue a Response Action Outcome (RAO) indicating that the contaminated areas of concern were remediated in accordance with the applicable regulations and that no further remedial action is required. It doesn't mean the site is free of contamination, but that no further action is required except for periodic groundwater monitoring and sampling. No further remedial action will apply to the site in its current use. A different use, such as residential, may require additional remediation.

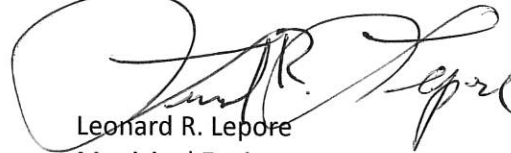
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Attached please find the proposal of CMF Associates dated November 6, 2018 to provide the professional services required under New Jersey's Site Remediation Reform Act. The fee for these services is \$59,500.00. A Resolution of Award is attached.

If you have any questions, please feel free to contact me.

Very truly yours,

A handwritten signature in black ink, appearing to read "L. R. Lepore", written over a large, stylized circular flourish.

Leonard R. Lepore
Municipal Engineer
Director of Public Works

LRL/az

cc: John K. Sayers
John Gross
Manal Baba, LSRP
Behram Turan, PE, LSRP

RESOLUTION

WHEREAS, The Township of West Orange obtained the services of Manal Baba, Licensed Site Remediation Professional (LSRP), of CME Associates of Monmouth Junction, New Jersey and formerly of T&M Associates of Middletown, New Jersey to provide professional services to remediate contaminated soil and groundwater at the Public Works Building, 25 Lakeside Avenue, associated with a former leaking underground storage tank; and

WHEREAS, to maintain compliance with New Jersey's Site Remediation Reform Act, additional Soil Sampling and Monitoring Well Gauging and Sampling of groundwater are required; and

WHEREAS, the purpose of this additional Groundwater Sampling and Soil Sampling is to demonstrate the natural degrading of the contaminants and to use the Soil Samples for Compliance Averaging to further demonstrate compliance with the NJDEP Technical Requirements for Site Remediation; and

WHEREAS, the goal of this work is for the LSRP to issue a Response Action Outcome (RAO) which will state that contaminated areas of concern were remediated in accordance with the applicable regulations, and that no further remedial action is required; and

WHEREAS, the firm of CME ASSOCIATES prepared a proposal dated November 6, 2018 to provide services for Soil Sampling, Monitoring Well Gauging and Sampling, Classification Exception Area (CEA) Application, Contaminant Transport Modeling and Groundwater, Remedial Action Permit Reporting, Project Management and Issuance of a Response Action Outcome (RAO) for a fee not to exceed \$59,500.00; and

WHEREAS, CME Associates responded to the Township's Request for Professional Qualifications;
and

WHEREAS, the Municipal Engineer finds the proposal acceptable; and

WHEREAS, sufficient funds exist for this work; and

WHEREAS, the Township Council concurs in the foregoing

NOW THEREFORE BE IT RESOLVED by the Township Council of the Township of West Orange that a Professional Services contract be awarded to CME Associates, 3759 Highway 1 South, Suite 100, Monmouth Junction, New Jersey 08852, Manal Baba, LSRP, to provide professional services associated with the remediation of contaminated soil and groundwater at the Public Works Building, 25 Lakeside Avenue from a former leaking underground storage tank in accordance with their proposal dated November 6, 2018 for a fee not to exceed \$59,500.00.

Karen J. Carnevale, RMC, Municipal Clerk

Susan McCartney
Council President

Adopted:

I certify funds are available
from the following account

Account Number
03-2507-17-0600-010
\$59,500.00

John O. Gross, Chief Financial Officer



JOHN H. ALLGAIR, PE, PP, LS (1983-2001)
DAVID J. SAMUEL, PE, PP, CME
JOHN J. STEFANI, PE, LS, PP, CME
JAY B. CORNELL, PE, PP, CME
MICHAEL J. McCLELLAND, PE, PP, CME
GREGORY R. VALES, PE, PP, CME

TIMOTHY W. GILLEN, PE, PP, CME
BRUCE M. KOCH, PE, PP, CME
LOUIS J. PLOSKONKA, PE, CME
TREVOR J. TAYLOR, PE, PP, CME
BEHRAM TURAN, PE, LSRP
LAURA J. NEUMANN, PE, PP
DOUGLAS ROHMEYER, PE, CFM, CME
ROBERT J. RUSSO, PE, PP, CME

November 6, 2018

Leonard R. Lepore, PE, Municipal Engineer
Township of West Orange
Director, Department of Public Works, Engineering Division
25 Lakeside Avenue, West Orange, NJ 07052

**Re: Revised Proposal for Professional Services - Groundwater Monitoring and
Confirmatory Soil Sampling
Department of Public Works at 25 Lakeside Avenue
Township of West Orange, Essex County, New Jersey
NJDEP CASE #93-05-04-1501-12 & 99-04-06-1412-47
NJDEP SRP PI# 014423**

Dear Mr. Lepore:

CME Associates (CME) is pleased to submit this proposal to the Township of West Orange (Client) to continue Professional Environmental and Licensed Site Remediation Professional (LSRP) Services at the Department of Public Works facility located at 25 Lakeside Avenue in West Orange.

The LSRP of Record for the Site; Manal Baba is a CME employee and will continue to provide project management and technical support services, and consult with regulatory authorities, as necessary, for this project.

The proposed scope of work is prepared to satisfy the New Jersey Department of Environmental Protection (NJDEP) requirements stated in the Administrative Requirements for Remediation of Contaminated Sites (ARRCS Rule, N.J.A.C. 26:C) and the Technical Requirements for Site Remediation (Tech Rule, N.J.A.C. 7:26E), in accordance with New Jersey's Site Remediation Reform Act (SRRA).

BACKGROUND

A groundwater and soil delineation program and additional groundwater investigations were implemented at the Site to evaluate the impacts resulting from an on-Site 4,000-gallon gasoline underground storage tank (UST) discharge. Based on analytical results, it appeared that benzene, toluene, ethylbenzene, and xylenes (BTEX), methyl tertiary butyl ether (MTBE) and lead are the



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contaminants of concern in the groundwater. Furthermore, it appeared that the contamination plume originated in the vicinity of the UST and migrated along the general direction of groundwater flow which was determined to be easterly towards the nearby Brook.

In 2014-2015, additional soil and groundwater delineation was completed to evaluate the current conditions and extent of the groundwater impacts and soil impacts at the Site. A review of the latest soil sampling analytical results indicated that benzene was detected in B1-A, B2-A and B3-A at respective concentrations of 0.178, 0.677 and 3.44 mg/kg which exceeded the Impact to Ground Water Soil Screening Level (IGWSSL) and/or Residential Direct Contact SRS of 2 mg/kg and below Non-Residential Direct Contact SRS of 5 mg/kg.

Ethylbenzene, toluene and total Xylenes were also detected in B3-A at concentrations that exceeded the IGWSSL SRS. Ethylbenzene and total Xylenes were also detected in B1-A at concentrations that exceeded the IGWSSL SRS. Total Xylenes were also detected in B2-A at a concentration that exceeded the IGWSSL SRS.

TIVOC was detected in MW-1, at a concentration of 1,600 µg/L which exceeded the NJDEP Interim Generic GWQS of 500 µg/L. No additional contaminants of concern related to the UST were reported above the GWQS.

The most recent results indicate that only benzene is detected above the GWQS in MW-1, MW-4 and MW-5. The dissolved groundwater benzene plume appears to be limited within source area wells at the Site due to natural attenuation/degradation.

SCOPE OF SERVICES

Based on the review of existing remediation documents, the LSRP of Record has prepared the following scope of work to comply with the NJDEP Technical Requirements for Site Remediation at the Site and provide the consultation and project management necessary to continue to advance the project towards closure.

Task 1: Soil Sampling, the SPLP Test, and Use Compliance Averaging

The purpose of the soil sampling is to collect additional soil samples in order to use alternatives to demonstrate that compliance may be achieved for each specified pathway using compliance averaging procedures and SPLP Test. For each contaminant detected in soil at the Site, it is required to develop site-specific impact to groundwater exposure pathway soil remediation standards pursuant to N.J.A.C. 7:26D-1.1(b), and following the



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Department guidance “Introduction to Site-Specific Impact to Ground Water Soil Remediation Standards Guidance Documents”. The Site-specific impact to groundwater exposure pathway soil remediation standard will be based upon the classification of the groundwater located at the Site.

The sample locations and depths will be biased towards the areas that were investigated previously and depths of highest contamination identified during previous sampling events.

Soil sampling consisting of twelve (12) soil borings will be implemented at the AOC to an average approximate depth of 10 feet bsg using Goeprobe equipment. Twelve (12) soil samples will be collected from the soil borings; the soil samples will be analyzed by an NJDEP- certified laboratory for BTEX (benzene, toluene, ethylbenzene and xylenes). Additionally, three sets of samples will be collected for the Synthetic Precipitation Leaching Procedure (SPLP) analysis (United States Environmental Protection Agency (USEPA) SW-846 test method) which will be used to estimate the site-specific adsorption-desorption potential of BTEX compounds that may impact groundwater. A sample set consists of one sample for total contaminant analysis (5 or 25 g), one Encore® sample for SPLP testing (25 g), and a sample for soil moisture determination. Field and trip blank samples will be incorporated into the sampling plan for quality assurance/quality control purposes.

Field screening techniques will be performed in accordance with the NJDEP Technical Requirements for Site Remediation (N.J.A.C. 7:26E) to determine the potential presence of impacted materials. The field screening will include evaluating the extracted materials for the potential presence of volatile organic compounds using a photoionization detector (PID).

It should be noted that after the evaluation of the contaminant concentrations and use alternatives to demonstrate compliance with IGWSRS, if the concentration of any contaminant exceeds its applicable direct contact exposure pathway soil remediation standard using either single-point compliance or compliance averaging, an institutional control such as Deed Notice (DN) and/or engineering control (if appropriate) pursuant to N.J.A.C. 7:26C-7 should be implemented. It should be noted that if a DN and/or engineering control is approved for the Site, the Township of West Orange will be



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responsible for all remedial action permit and remedial action protectiveness certification requirements, as well as all soil remedial action permit fees and obligations pursuant to N.J.A.C. 7:26C-4.6. If a DN is required for the Site, CME will notify the Township of West Orange and provide a cost estimate for preparation and submittal of a DN with a soil Remedial Action Permit and Fees.

Task 2: Monitoring Well Gauging and Sampling (Four Rounds)

Per the Technical Requirements N.J.A.C.7:26E-6.3(e), groundwater monitoring and performance requirements for natural remediation, 8 consecutive groundwater sampling events should be conducted at the Site and should show a degradation trend. In order to show that contaminant sources have been contained or removed, plume migration will not impact any receptors before contaminants degrade to acceptable concentrations, and concentrations are declining over time, CME will collect samples from the existing ten monitoring wells. Groundwater samples will be obtained using the NJDEP required “low flow” procedures in accordance with the NJDEP Field Sampling Procedures Manual (August 2005). Groundwater samples will be analyzed for TCL VO+15, TBA and lead. A QA/QC plan consisting of field and trip blank samples will be incorporated into the sampling program. Purged groundwater will be containerized in drums and disposed of off-site at an approved disposal facility. A total of four drums will be disposed of and the cost is included in this proposal.

Task 3: Classification Exception Area (CEA) Application, Contaminant Fate and Transport Modeling and Groundwater Remedial Action Permit

Natural Attenuation is no action alternative and based on natural processes, especially biodegradation, volatilization and adsorption, to clean up the groundwater. Natural attenuation is cost efficient and have minimum requirements as a CEA and Groundwater Remedial Action Permit required to implement this alternative.

Groundwater monitoring and performance requirements for natural remediation are outlined under N.J.A.C.7:26E-6.3(e). For natural attenuation remediation, groundwater monitoring data are used to show that contaminant sources have been contained or removed, plume migration will not impact any receptors before contaminants degrade to acceptable concentrations, and concentrations are declining over time as predicted. For natural remediation scenarios, modeling should be applied to eight consecutive rounds of



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groundwater sampling data to document whether a decreasing trend in contaminant concentrations is occurring over time.

Based on the available results and the results of the proposed additional four sampling events, CME will establish fate and transport modeling to evaluate the extent of dissolved groundwater impacts (plume) and to compare the degradation predictions to existing data. CME will prepare and submit the CEA Fact Sheet Application and prepare a groundwater remedial action permit pursuant to the Administrative Requirements for Remediation of Contaminated Sites (ARRCS Rule, N.J.A.C. 26:C).

The CEA application will be submitted with a Groundwater Remedial Action Permit for natural attenuation as the remedial action for the groundwater impacts related to the UST discharge at the Site, a Groundwater Remedial Action Permit Application will be prepared and submitted with NJDEP permit application fee of \$1,565; this Fee is included in the cost for this proposal.

Task 4: Reporting and Management

Remedial Action Report (RAR)

CME will prepare a Remedial Action Report (RAR) with Document Submission Form which will detail activities conducted to achieve compliance with the NJDEP Technical Requirements for Site Remediation (N.J.A.C. 7:26E- 6.7) and the Administrative Requirements for the Remediation of Contaminated Sites (“the ARRCS Rule”). A Site plan, Case Inventory Document, updated Receptor Evaluation form and other pertinent items as specified in the Remedial Action Report submission requirements of the Technical Requirements for Site Remediation (N.J.A.C. 7:26E-6.7) will be included.

CME will prepare a Safety and Health Plan (SHP) and Quality Assurance Project Plan (QAPP) that are required to be submitted with the RAR.

Task 5: Issuance of Response Action Outcome (RAO)

The RAO is a written determination by the LSRP indicating that the contaminated areas of concern were remediated in accordance with applicable regulations and that no further remedial action is required.



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Following the successful completion of the remediation in accordance with all applicable regulations, the LSRP will prepare a Response Action Outcome (RAO) for the areas of concern in accordance with the Administrative Requirements for the Remediation of Contaminated Sites (N.J.A.C. 7:26C-6). The LSRP will use the standard format RAO form document posted by the NJDEP to ensure content consistency. The LSRP is prohibited from modifying the content of an RAO except as explicitly provided for in the NJDEP guidance.

PROPOSED BUDGET

The budget for completion of the proposed scope of work is **\$59,500** as indicated in the following table:

Task	Cost
Task 1- Soil Sampling, the SPLP Test, and Use Compliance Averaging	\$ 9,550
Task 2- Monitoring Well Gauging and Sampling (four rounds)	\$ 26,250
Task 3- Classification Exception Area (CEA) Application, Contaminant Fate and Transport Modeling and Groundwater Remedial Action Permit	\$ 5,900
Task 4- Reporting and Management	\$ 13,300
Task 5- Response Action Outcome (RAO)	\$ 4,500
Total	\$ 59,500

The proposed budget includes approximately **\$16,400** for subcontractor's fee, including laboratory analysis, equipment cost, etc., and NJDEP fees. The budget contained in this proposal is the firm's best estimate of the effort required to carry out the project as outlined in the scope of work. However, the client will be billed for the actual effort expended to implement the Scope of Services in accordance with the attached billing rates for Environmental Engineering and LSRP services. In no event will the client be billed or work performed in excess of the proposal amount without client's prior approval.

ASSUMPTIONS AND LIMITATIONS

The scope of work is limited to the tasks outlined above. Based on the investigation findings, additional remediation activities may be required to comply with N.J.A.C. 7:26E and close the case. A separate cost proposal will be provided for any additional work.



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SPECIAL CONDITIONS FOR LSRP SERVICES

- The enactment of the Site Remediation Reform Act (SRRA; N.J.S.A. 58:10C-1 et seq) on May 7, 2009, and the adoption of the Administrative Requirements for the Remediation of Contaminated Sites (ARRCS; N.J.A.C. 7:26C) on November 4, 2009 require that all new remediation cases follow the provisions of SRRA. A key requirement of these rules is that a Licensed Site Remediation Professional (LSRP) must oversee all new remediation cases.
- The ARRCS requires the person responsible for conducting a remediation to notify the NJDEP of any confirmed discharges of contaminants or condition of Immediate Environmental Concern (“IEC”). Please note that being an LSRP, as a State licensed professional, I will thus have the obligation to report any such conditions to the NJDEP without obtaining any prior approval from the client.
- LSRP will provide the required services in accordance with SRRA and has the obligation to submit, maintain and preserve the relevant documents.
- LSRP is not responsible for client’s failure to disclose relevant information, perform SRRA obligations, fund remediation, and follow LSRP’s recommended actions. Client’s failure to perform these obligations may result in fines/penalties by the NJDEP.
- The issuance of RAO by LSRP is not a guarantee or warranty that the site is free of contamination, or that it will be accepted by the NJDEP.
- NJDEP may audit the RAO within three (3) years after the date the LSRP filed the RAO with the NJDEP. LSRP is not responsible for additional requirements imposed by NJDEP after review/audit, except to the extent they arise out of LSRP’s negligence.

We appreciate the opportunity to submit this proposal and assist the Township on this project. Should you have any questions, please do not hesitate to call me at 732-951-2101, extension 103.

Respectfully submitted,
CME Associates



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Behram Turan, P.E., LSRP- Principal
Director of Environmental Services

Enclosure

cc: Michael McClelland, P.E., P.P. - Partner / CME Associates