
444 21st Street South · La Crosse, Wisconsin · 54601

August 31, 2016

Dale Hexom, P.E.
Director of Public Works
City of La Crosse
400 La Crosse Street
La Crosse, WI 54601

Via email: hexomd@cityoflacrosse.org

Proposal #1601064: Site Investigation
La Crosse River Marsh – Myrick Park – Former La Crosse Gun Club
Reported Lead Contamination
DNR BRRTS Activity #02-32-576301
DNR FID #632138980

Dear Mr. Hexom:

Coulee Environmental Solutions™, a division of The OS Group, LLC (CES) is pleased to present this proposal to conduct additional site investigation activities for the La Crosse River Marsh Lead Contamination.

Background and Objectives

CES has completed its review of the UW-L Report and completed a draft Site Investigation Work Plan (SIWP) for your review. Upon your review and approval, the SIWP will be submitted to the DNR for review and approval. This proposal assumes the DNR will approve the SIWP with no or minimal changes.

Scope of Work

The Scope of Work is detailed in the draft SIWP, dated August, 2016. CES proposes to perform the following scope of work to complete the NR 716 Site Investigation of the legacy lead shot contamination in the LRM. This phase of the Site Investigation will focus primarily on identifying, characterizing, and defining the extent and degree of potential polynuclear aromatic hydrocarbons (PAH) contamination. Note: All analyses denoted as lab or laboratory will be performed by a Wisconsin-certified analytical laboratory following approved methods as defined in EPA publication SW 846, Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. All sample locations will be located by GPS.

Task 1 Archeological Investigation

Indian mounds are present in Myrick Park, and other archeological resources may be present within the zone of contamination. While most of the land surface in the lead shot fall zone is currently submerged, the damming and creation of Pool 8 of the Mississippi River raised the water level possibly inundating archeological resources. The presence of archeological resources may preclude or complicate potential remedial actions such as dredging contaminated sediments.

CES proposes to engage the Mississippi Valley Archeology Center to further evaluate the potential presence of additional archeological resources in the zone of contamination by performing the following activities:

1. Archeological literature review
2. Monitoring of soil borings and sediment cores
3. Conduct shovel tests near the shoreline on the north end of Myrick Park
4. Document findings in letter report(s)

Task 2 Soil Investigation

CES propose to perform the following soil investigation activities:

1. Collect twenty-two (22) shallow (0 to 2 & 2 to 4 feet bgs) soil samples for PAH analysis from eleven (11) locations along the trail and adjacent land and around the existing shooting station. Two of the samples will be from the piezometer borehole. All samples will be collected by Geoprobe with split-spoon sampler.
2. Classify soil samples according to the unified soil classification system
3. Prepare and submit twenty-two (22) soil samples to a state-certified laboratory for PAH analysis. Because of the potential presence of lead shot, the lab sample extraction method for PAH analysis will be modified. Specifically, the possible presence of metal lead would be problematic to the standard microwave extraction method (EPA method 3546). Therefore, samples will be prepared using a sonication extraction (EPA method 3550C). The samples then would be analyzed for PAHs by EPA method 8270 SIM.
4. Lab analyze the four (4) samples from the two (2) probes near the existing shooting station for lead by EPA method 6010 / 200.7.
5. Manually remove & count lead pellets in the field for lead soil samples; report lead shot count on a count per gram of soil basis.

Task 3 Groundwater Investigation

CES proposes to perform the following groundwater investigation activities:

1. Construct a Piezometer Nest of one water table observation well and two piezometers along the dike trail adjacent to the sediment lead hot spot. The observation well and piezometers will be constructed by hollow-stem auger and finished as stick-ups with flush-threaded, 2-inch ID, schedule 40 PVC pipe and protective cover steel pipe, per Chapter NR 141, Wisconsin Administrative Code, and as described below:

Table1: Monitoring Well Depths and Screen Lengths

Well #	Depth of Screen Bottom Feet below Water Table	Screen Length (feet)
MW-1	4	8
PZ-1A	19	3
PZ-1B	34	3

2. Collect split-spoon soil samples continuously from a single borehole at the location of the piezometer nest.
3. Classify soils according to the Unified Soil Classification System.
4. Develop monitoring wells and piezometers per NR 141.
5. Survey piezometers top-of-casing elevations to a local datum and the stage staff gage at the culvert beneath the trail.
6. Conduct two (2) quarterly groundwater sampling events
7. Collect groundwater samples from the monitoring well and piezometers, during each event.
8. Field analyze groundwater samples for pH, specific conductivity, dissolved oxygen and oxidation-reduction potential.
9. Field filter lead groundwater samples.
10. Submit samples to a state-certified laboratory for PAH and dissolved lead analyses.
11. Measure water levels in the monitoring wells and at the culvert during each sampling event and not less frequently than monthly during a range of hydrologic conditions, including spring high water, over a period of six (6) to eight (8) months.

Task 4 Sediment Investigation

CES proposes to perform the following sediment investigation activities:

1. Collect twenty-five (25) three (3) foot sediment cores for PAH analysis; 21 within the lead shot fall zone to characterize PAH contamination and four (4) outside to characterize PAH background levels. Samples collected for PAH analyses will be collected with a manual stainless steel core sampler.
2. Core samples will be visually inspected for the existence of strata formation, and a written description including position, length, odor, texture will be recorded.
3. Laboratory analyze two (2) samples per core for PAH using the sonication extraction method previously described.

Task 5 Surface Water Investigation

CES proposes to perform the following sediment investigation activities:

1. Collected twenty-five (25) surface water samples; one sample from each sediment core location. Surface water samples will be collected using a peristaltic pump and weighted polyethylene tubing while lowering through the water column, in order to obtain samples that are representative of the water column.
2. Field analyze samples for pH, dissolved oxygen, specific conductivity and oxidation-reduction potential.
3. Submit samples for PAH laboratory analysis by a Wisconsin certified laboratory.

Task 6 Investigative Waste Management

CES proposes to perform the following investigative waste management activities:

1. Submit an additional two deeper samples (5 to 7 feet and 10 to 12 feet bgs) from the Piezometer boring for lead and PAH analysis for the purpose of characterizing the soil cuttings and potentially finding cheaper disposal options.
2. Supply eight (8) 55-gallon, steel drums with lids.
3. Drum soil cuttings from HSA drilling, geoprobe and sediment core sampling.
4. Drum sediments separately from soils
5. Disposal of soil and sediment investigative waste (IW) will be determined during the Remedial Action Options Analysis as IW may potentially be disposed with dredged sediments, should that serve as part of the remedial action. Monitoring well development and purge water will be drummed, and disposal will be based on analytical results.

Task 7 Receptor Survey

CES proposes to perform the following receptor survey activities:

1. Review the locations of the nearby municipal wells and their capture zones.
2. Review the Water Utility's water quality data, specifically for lead and PAH (as available) analyses performed on nearby municipal wells.
3. Review the operational status (i.e., in use, standby; out of use & abandoned, out of use and not abandoned, etc.) of nearby municipal and private (if any) water supply wells by further consulting with Mark Johnson.

Task 8 Data Presentation and Interpretation

CES proposes to perform the following data presentation and interpretation activities:

1. Obtain comprehensive data set from UW-L
2. Present all data in graphics, tables and other formats that will facilitate review, comprehension and interpretation of data, with a specific emphasis on facilitating remedial action options analysis and selection. *Note: due to the extremely large UW-L data set, CES proposes not to enter all UW-L data into the DNR spreadsheet templates.*

Task 9 Report Preparation

CES proposes to perform the following report preparation activities:

1. Prepare a draft Site Investigation Report (SIR) in digital format for the City's review.
2. Finalize the SIR for submittal to the DNR.
3. Prepare two (2) bound hard copies of the final report: one for submittal to the DNR, per DNR requirements, and one for the City.
4. Submit the final report in electronic format to both the City and DNR.

Task 10 Progress Updates

CES will provide regular status updates by email to the City and the DNR at the completion of each Task or significant set of activities.

Timeline

CES proposes the schedule outlined below:

Days to completion after CES receives Notice to Proceed (NTP) from the City, assuming an NTP of approximately October 1, 2016:

NTP + 30	Complete Task 1 Archeological Survey, Activities 1, 3 and associated report
NTP + 45	Complete Task 2 Soil Investigation
NTP + 45	Construct, survey and develop piezometer nest (Task 3 Groundwater Investigation, Activities 1 through 5)
NTP + 60	Collect Quarter 1 Groundwater Samples (Task 3 Groundwater Investigation, Activities 6 through 11)
NTP + 90	Provide progress update including summary of soil and groundwater analytical results
NTP + 135	Conduct Sediment and Surface Water Investigation (Tasks 4 and 5). Planned to be performed through ice in January or early February.
NTP + 150	Collect Quarter 2 Groundwater Samples (Task 3 Groundwater Investigation, Activities 6 through 11)
NTP + 210	Submit draft Site Investigation Report to City (Task 9, Activity 1)
NTP + 225	Submit final Site Investigation Report to City and DNR (Task 9, Activities 2 through 4)

All other task and activities will be performed in parallel with the above timeline so as to achieve the final submittal schedule.

CES understands that the timeline may be revised based on DNR or City requirements.

Budget

CES proposes to provide these services on a not-to-exceed, time-and-materials basis at the attached Labor and Expense Rate Table. The estimate below is based on Tasks 1 through 10 of the above scope of work and current project conditions. Deviations from the scope and project conditions will constitute a changed condition which may necessitate a change in budget or schedule. **The not-to-exceed estimate for Tasks 1 through 10 is \$48,750.**

Invoicing

The project will be invoiced monthly or upon completion of project phases.

Standard of Care

In performing this scope of work, CES will exercise that degree of care and skill ordinarily exercised under similar circumstances, such as scope, schedule and budget, by firms in the environmental consulting profession performing substantially similar services and practicing at the same time in the same or similar locality.

Agreement

CES proposes perform the scope of work in this proposal under our existing agreement, terms and rates. Please indicate your acceptance by signing below.

Closing

CES appreciates this opportunity to propose our services. Please do not hesitate to call me to discuss our proposal. We are amenable to considering proposal modifications you might suggest.

Best regards,

John C Storlie, PG

Coulee Environmental Solutions™

A division of The OS Group, LLC

444 21st Street South

La Crosse, Wisconsin 54601

Phone: 608.433.9389

E-Mail Address: John.Storlie@theosgrp.com

Acceptance

On behalf of the City of La Crosse, I hereby accept this proposal to perform the above scope of work and that this work shall be performed under the same Project-Specific Labor and Expense Rate Table and Professional Services Agreement, dated May 25, 2016.

Signed: _____ Date: _____, 2016

Printed Name and Title: _____